

Appendix 1. Reading 3 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
150	192	.37	192	0.37	269	1	.00	248	0.47	322	3	.01	340	0.65
167	1	.00	193	0.37	270	1	.00	249	0.47	323	2	.00	342	0.65
168	1	.00	194	0.37	271	2	.00	251	0.48	324	5	.01	347	0.66
173	1	.00	195	0.37	272	1	.00	252	0.48	325	3	.01	350	0.67
174	1	.00	196	0.37	273	3	.01	255	0.48	326	7	.01	357	0.68
175	1	.00	197	0.37	275	1	.00	256	0.49	327	3	.01	360	0.68
179	1	.00	198	0.38	276	2	.00	258	0.49	328	6	.01	366	0.70
180	1	.00	199	0.38	277	3	.01	261	0.50	329	1	.00	367	0.70
181	1	.00	200	0.38	278	1	.00	262	0.50	330	1	.00	368	0.70
182	1	.00	201	0.38	279	1	.00	263	0.50	331	3	.01	371	0.71
184	2	.00	203	0.39	281	2	.00	265	0.50	332	4	.01	375	0.71
186	1	.00	204	0.39	283	1	.00	266	0.51	333	5	.01	380	0.72
188	2	.00	206	0.39	284	1	.00	267	0.51	334	5	.01	385	0.73
203	2	.00	208	0.40	285	1	.00	268	0.51	335	4	.01	389	0.74
204	1	.00	209	0.40	286	1	.00	269	0.51	336	3	.01	392	0.75
205	1	.00	210	0.40	287	2	.00	271	0.52	337	3	.01	395	0.75
213	1	.00	211	0.40	288	2	.00	273	0.52	338	3	.01	398	0.76
214	2	.00	213	0.41	289	1	.00	274	0.52	339	4	.01	402	0.76
217	1	.00	214	0.41	291	3	.01	277	0.53	340	7	.01	409	0.78
218	2	.00	216	0.41	292	1	.00	278	0.53	341	5	.01	414	0.79
220	1	.00	217	0.41	293	3	.01	281	0.53	342	2	.00	416	0.79
221	1	.00	218	0.41	294	2	.00	283	0.54	343	13	.02	429	0.82
228	2	.00	220	0.42	298	2	.00	285	0.54	344	5	.01	434	0.83
229	1	.00	221	0.42	299	1	.00	286	0.54	345	8	.02	442	0.84
235	1	.00	222	0.42	300	1	.00	287	0.55	346	6	.01	448	0.85
237	1	.00	223	0.42	301	2	.00	289	0.55	347	7	.01	455	0.87
238	1	.00	224	0.43	302	1	.00	290	0.55	348	5	.01	460	0.87
239	1	.00	225	0.43	303	2	.00	292	0.56	349	4	.01	464	0.88
240	1	.00	226	0.43	304	3	.01	295	0.56	350	8	.02	472	0.90
241	2	.00	228	0.43	305	1	.00	296	0.56	351	5	.01	477	0.91
242	1	.00	229	0.44	306	2	.00	298	0.57	352	4	.01	481	0.91
244	1	.00	230	0.44	307	1	.00	299	0.57	353	10	.02	491	0.93
246	2	.00	232	0.44	308	1	.00	300	0.57	354	5	.01	496	0.94
248	1	.00	233	0.44	309	1	.00	301	0.57	355	8	.02	504	0.96
249	1	.00	234	0.44	312	2	.00	303	0.58	356	11	.02	515	0.98
251	1	.00	235	0.45	313	6	.01	309	0.59	357	4	.01	519	0.99
252	1	.00	236	0.45	314	4	.01	313	0.60	358	4	.01	523	0.99
253	3	.01	239	0.45	315	2	.00	315	0.60	359	5	.01	528	1.00
254	1	.00	240	0.46	316	3	.01	318	0.60	360	12	.02	540	1.03
255	1	.00	241	0.46	317	2	.00	320	0.61	361	8	.02	548	1.04
257	1	.00	242	0.46	318	5	.01	325	0.62	362	7	.01	555	1.06
258	3	.01	245	0.47	319	4	.01	329	0.63	363	8	.02	563	1.07
261	1	.00	246	0.47	320	3	.01	332	0.63	364	12	.02	575	1.09
268	1	.00	247	0.47	321	5	.01	337	0.64	365	7	.01	582	1.11

Appendix 1. Reading 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
366	11	.02	593	1.13	411	24	.05	1387	2.64	456	56	.11	3458	6.58
367	9	.02	602	1.14	412	24	.05	1411	2.68	457	89	.17	3547	6.74
368	8	.02	610	1.16	413	35	.07	1446	2.75	458	78	.15	3625	6.89
369	11	.02	621	1.18	414	32	.06	1478	2.81	459	87	.17	3712	7.06
370	10	.02	631	1.20	415	29	.06	1507	2.87	460	72	.14	3784	7.20
371	16	.03	647	1.23	416	31	.06	1538	2.92	461	71	.14	3855	7.33
372	12	.02	659	1.25	417	21	.04	1559	2.96	462	68	.13	3923	7.46
373	8	.02	667	1.27	418	34	.06	1593	3.03	463	90	.17	4013	7.63
374	9	.02	676	1.29	419	37	.07	1630	3.10	464	68	.13	4081	7.76
375	13	.02	689	1.31	420	51	.10	1681	3.20	465	82	.16	4163	7.92
376	10	.02	699	1.33	421	30	.06	1711	3.25	466	79	.15	4242	8.07
377	17	.03	716	1.36	422	30	.06	1741	3.31	467	92	.17	4334	8.24
378	13	.02	729	1.39	423	40	.08	1781	3.39	468	82	.16	4416	8.40
379	15	.03	744	1.41	424	29	.06	1810	3.44	469	83	.16	4499	8.55
380	16	.03	760	1.45	425	33	.06	1843	3.50	470	95	.18	4594	8.74
381	15	.03	775	1.47	426	39	.07	1882	3.58	471	102	.19	4696	8.93
382	18	.03	793	1.51	427	49	.09	1931	3.67	472	89	.17	4785	9.10
383	10	.02	803	1.53	428	41	.08	1972	3.75	473	90	.17	4875	9.27
384	12	.02	815	1.55	429	29	.06	2001	3.80	474	101	.19	4976	9.46
385	18	.03	833	1.58	430	41	.08	2042	3.88	475	100	.19	5076	9.65
386	7	.01	840	1.60	431	47	.09	2089	3.97	476	114	.22	5190	9.87
387	17	.03	857	1.63	432	50	.10	2139	4.07	477	110	.21	5300	10.08
388	17	.03	874	1.66	433	38	.07	2177	4.14	478	102	.19	5402	10.27
389	16	.03	890	1.69	434	47	.09	2224	4.23	479	96	.18	5498	10.45
390	20	.04	910	1.73	435	44	.08	2268	4.31	480	97	.18	5595	10.64
391	20	.04	930	1.77	436	32	.06	2300	4.37	481	105	.20	5700	10.84
392	14	.03	944	1.79	437	48	.09	2348	4.46	482	113	.21	5813	11.05
393	25	.05	969	1.84	438	58	.11	2406	4.57	483	111	.21	5924	11.26
394	16	.03	985	1.87	439	41	.08	2447	4.65	484	115	.22	6039	11.48
395	19	.04	1004	1.91	440	44	.08	2491	4.74	485	133	.25	6172	11.74
396	25	.05	1029	1.96	441	51	.10	2542	4.83	486	119	.23	6291	11.96
397	17	.03	1046	1.99	442	43	.08	2585	4.92	487	133	.25	6424	12.22
398	19	.04	1065	2.03	443	58	.11	2643	5.03	488	117	.22	6541	12.44
399	25	.05	1090	2.07	444	59	.11	2702	5.14	489	125	.24	6666	12.68
400	22	.04	1112	2.11	445	64	.12	2766	5.26	490	136	.26	6802	12.93
401	18	.03	1130	2.15	446	54	.10	2820	5.36	491	137	.26	6939	13.19
402	26	.05	1156	2.20	447	57	.11	2877	5.47	492	127	.24	7066	13.44
403	28	.05	1184	2.25	448	68	.13	2945	5.60	493	155	.29	7221	13.73
404	17	.03	1201	2.28	449	63	.12	3008	5.72	494	130	.25	7351	13.98
405	25	.05	1226	2.33	450	73	.14	3081	5.86	495	144	.27	7495	14.25
406	30	.06	1256	2.39	451	57	.11	3138	5.97	496	158	.30	7653	14.55
407	26	.05	1282	2.44	452	54	.10	3192	6.07	497	150	.29	7803	14.84
408	30	.06	1312	2.49	453	62	.12	3254	6.19	498	167	.32	7970	15.15
409	24	.05	1336	2.54	454	74	.14	3328	6.33	499	181	.34	8151	15.50
410	27	.05	1363	2.59	455	74	.14	3402	6.47	500	152	.29	8303	15.79

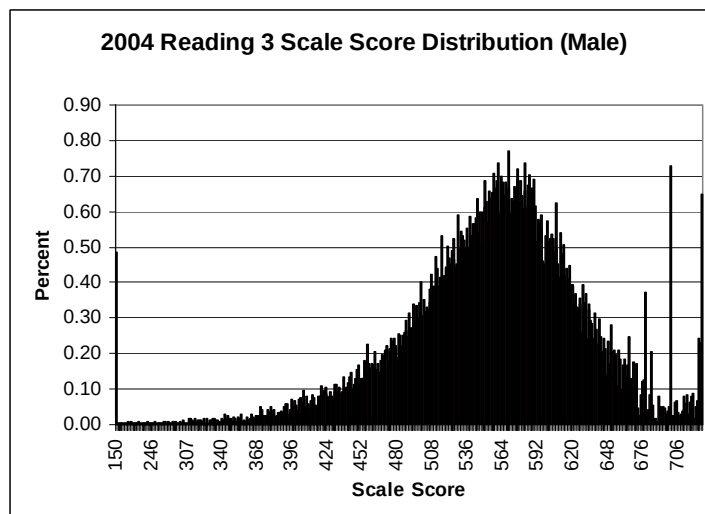
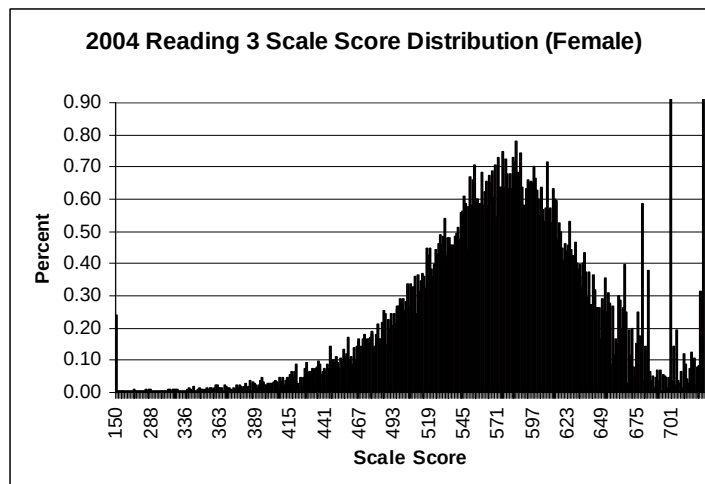
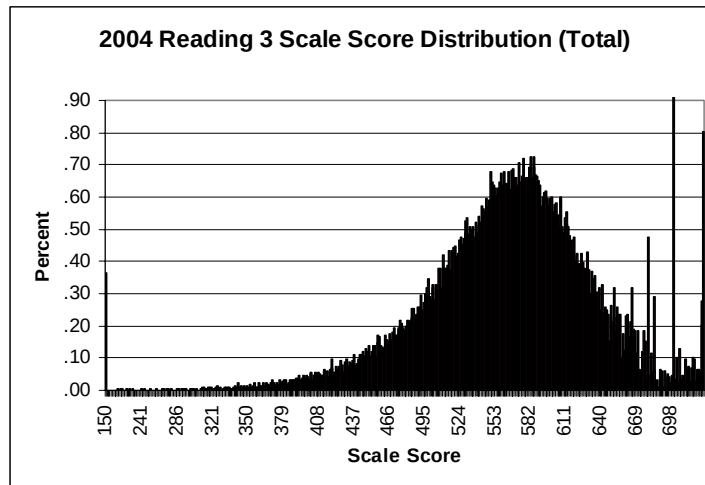
Appendix 1. Reading 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
501	148	.28	8451	16.07	546	301	.57	18932	36.00	591	302	.57	34259	65.14
502	167	.32	8618	16.39	547	312	.59	19244	36.59	592	301	.57	34560	65.71
503	172	.33	8790	16.71	548	251	.48	19495	37.07	593	316	.60	34876	66.32
504	148	.28	8938	17.00	549	310	.59	19805	37.66	594	323	.61	35199	66.93
505	173	.33	9111	17.32	550	356	.68	20161	38.34	595	325	.62	35524	67.55
506	163	.31	9274	17.63	551	315	.60	20476	38.93	596	314	.60	35838	68.14
507	172	.33	9446	17.96	552	339	.64	20815	39.58	597	291	.55	36129	68.70
508	198	.38	9644	18.34	553	335	.64	21150	40.22	598	301	.57	36430	69.27
509	198	.38	9842	18.71	554	331	.63	21481	40.85	599	313	.60	36743	69.87
510	167	.32	10009	19.03	555	318	.60	21799	41.45	600	316	.60	37059	70.47
511	221	.42	10230	19.45	556	329	.63	22128	42.08	601	292	.56	37351	71.02
512	199	.38	10429	19.83	557	323	.61	22451	42.69	602	267	.51	37618	71.53
513	192	.37	10621	20.20	558	341	.65	22792	43.34	603	304	.58	37922	72.11
514	199	.38	10820	20.57	559	355	.68	23147	44.01	604	306	.58	38228	72.69
515	204	.39	11024	20.96	560	334	.64	23481	44.65	605	286	.54	38514	73.23
516	228	.43	11252	21.40	561	358	.68	23839	45.33	606	267	.51	38781	73.74
517	196	.37	11448	21.77	562	329	.63	24168	45.95	607	314	.60	39095	74.34
518	227	.43	11675	22.20	563	337	.64	24505	46.60	608	316	.60	39411	74.94
519	227	.43	11902	22.63	564	337	.64	24842	47.24	609	267	.51	39678	75.45
520	234	.44	12136	23.08	565	356	.68	25198	47.91	610	258	.49	39936	75.94
521	235	.45	12371	23.52	566	328	.62	25526	48.54	611	281	.53	40217	76.47
522	219	.42	12590	23.94	567	360	.68	25886	49.22	612	292	.56	40509	77.03
523	223	.42	12813	24.36	568	322	.61	26208	49.83	613	273	.52	40782	77.55
524	245	.47	13058	24.83	569	362	.69	26570	50.52	614	266	.51	41048	78.05
525	221	.42	13279	25.25	570	348	.66	26918	51.18	615	253	.48	41301	78.53
526	251	.48	13530	25.73	571	348	.66	27266	51.85	616	241	.46	41542	78.99
527	238	.45	13768	26.18	572	335	.64	27601	52.48	617	245	.47	41787	79.46
528	247	.47	14015	26.65	573	333	.63	27934	53.12	618	249	.47	42036	79.93
529	276	.52	14291	27.17	574	372	.71	28306	53.82	619	221	.42	42257	80.35
530	257	.49	14548	27.66	575	339	.64	28645	54.47	620	211	.40	42468	80.75
531	282	.54	14830	28.20	576	349	.66	28994	55.13	621	223	.42	42691	81.18
532	255	.48	15085	28.68	577	379	.72	29373	55.85	622	207	.39	42898	81.57
533	267	.51	15352	29.19	578	341	.65	29714	56.50	623	207	.39	43105	81.96
534	263	.50	15615	29.69	579	347	.66	30061	57.16	624	206	.39	43311	82.35
535	251	.48	15866	30.17	580	348	.66	30409	57.82	625	224	.43	43535	82.78
536	266	.51	16132	30.67	581	326	.62	30735	58.44	626	209	.40	43744	83.18
537	251	.48	16383	31.15	582	365	.69	31100	59.14	627	200	.38	43944	83.56
538	275	.52	16658	31.67	583	382	.73	31482	59.86	628	177	.34	44121	83.89
539	258	.49	16916	32.17	584	348	.66	31830	60.52	629	225	.43	44346	84.32
540	269	.51	17185	32.68	585	381	.72	32211	61.25	630	196	.37	44542	84.70
541	284	.54	17469	33.22	586	365	.69	32576	61.94	631	197	.37	44739	85.07
542	274	.52	17743	33.74	587	353	.67	32929	62.61	632	157	.30	44896	85.37
543	300	.57	18043	34.31	588	349	.66	33278	63.28	633	193	.37	45089	85.74
544	297	.56	18340	34.87	589	343	.65	33621	63.93	634	171	.33	45260	86.06
545	291	.55	18631	35.43	590	336	.64	33957	64.57	635	182	.35	45442	86.41

Appendix 1. Reading 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
636	188	.36	45630	86.76	666	168	.32	49216	93.58	696	21	.04	50698	96.40
637	160	.30	45790	87.07	667	99	.19	49315	93.77	697	22	.04	50720	96.44
638	160	.30	45950	87.37	668	12	.02	49327	93.79	698	11	.02	50731	96.46
639	168	.32	46118	87.69	669	97	.18	49424	93.98	699	25	.05	50756	96.51
640	129	.25	46247	87.94	670	61	.12	49485	94.09	700	503	.96	51259	97.47
641	131	.25	46378	88.19	671	97	.18	49582	94.28	701	16	.03	51275	97.50
642	173	.33	46551	88.52	672	34	.06	49616	94.34	702	17	.03	51292	97.53
643	127	.24	46678	88.76	673	32	.06	49648	94.40	704	54	.10	51346	97.63
644	137	.26	46815	89.02	674	21	.04	49669	94.44	705	12	.02	51358	97.66
645	116	.22	46931	89.24	675	62	.12	49731	94.56	706	67	.13	51425	97.78
646	132	.25	47063	89.49	676	97	.18	49828	94.75	708	18	.03	51443	97.82
647	125	.24	47188	89.73	677	79	.15	49907	94.90	709	14	.03	51457	97.84
648	80	.15	47268	89.88	678	16	.03	49923	94.93	710	24	.05	51481	97.89
649	138	.26	47406	90.14	679	251	.48	50174	95.40	711	14	.03	51495	97.92
650	111	.21	47517	90.35	680	18	.03	50192	95.44	712	52	.10	51547	98.01
651	167	.32	47684	90.67	681	24	.05	50216	95.48	713	18	.03	51565	98.05
652	119	.23	47803	90.90	682	60	.11	50276	95.60	714	39	.07	51604	98.12
653	98	.19	47901	91.08	683	28	.05	50304	95.65	716	34	.06	51638	98.19
654	135	.26	48036	91.34	684	152	.29	50456	95.94	717	15	.03	51653	98.22
655	124	.24	48160	91.57	685	32	.06	50488	96.00	718	36	.07	51689	98.28
656	51	.10	48211	91.67	686	15	.03	50503	96.03	721	53	.10	51742	98.39
657	125	.24	48336	91.91	687	18	.03	50521	96.06	724	14	.03	51756	98.41
658	50	.10	48386	92.00	688	5	.01	50526	96.07	726	51	.10	51807	98.51
659	92	.17	48478	92.18	689	33	.06	50559	96.14	732	11	.02	51818	98.53
660	65	.12	48543	92.30	690	31	.06	50590	96.20	736	33	.06	51851	98.59
661	122	.23	48665	92.53	691	24	.05	50614	96.24	740	35	.07	51886	98.66
662	123	.23	48788	92.77	692	4	.01	50618	96.25	743	31	.06	51917	98.72
663	60	.11	48848	92.88	693	32	.06	50650	96.31	747	146	.28	52063	99.00
664	88	.17	48936	93.05	694	1	.00	50651	96.31	765	106	.20	52169	99.20
665	112	.21	49048	93.26	695	26	.05	50677	96.36	795	422	.80	52591	100.00

Figure 1. Reading 3 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 2. Spanish Reading 3 Scale Score Distribution

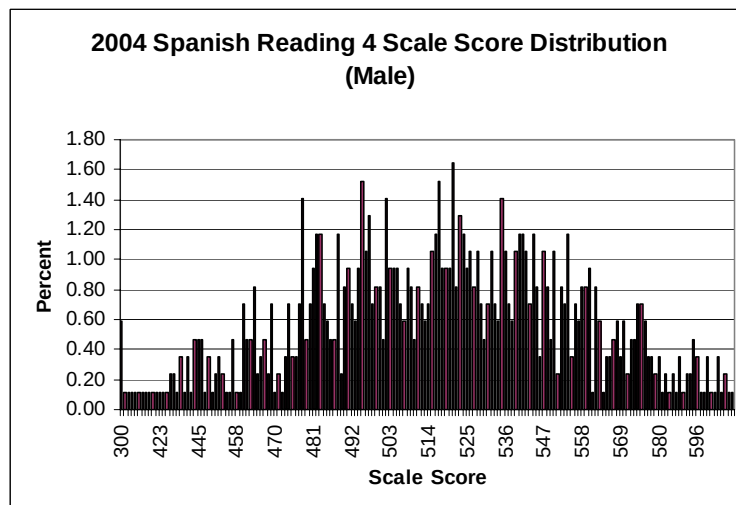
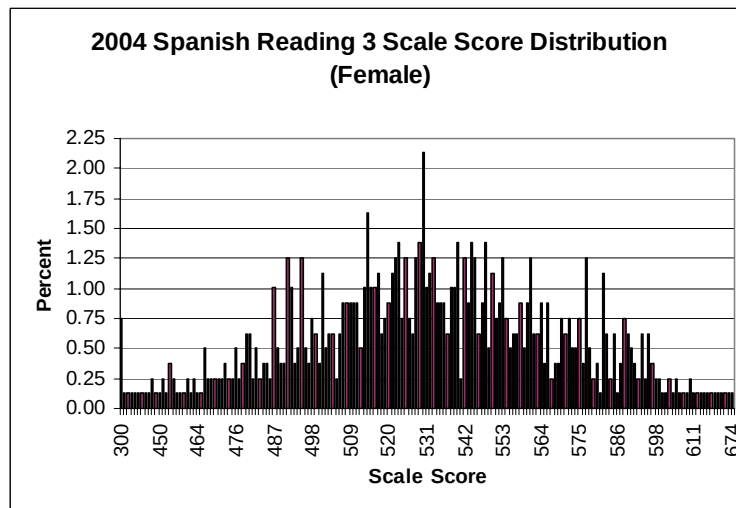
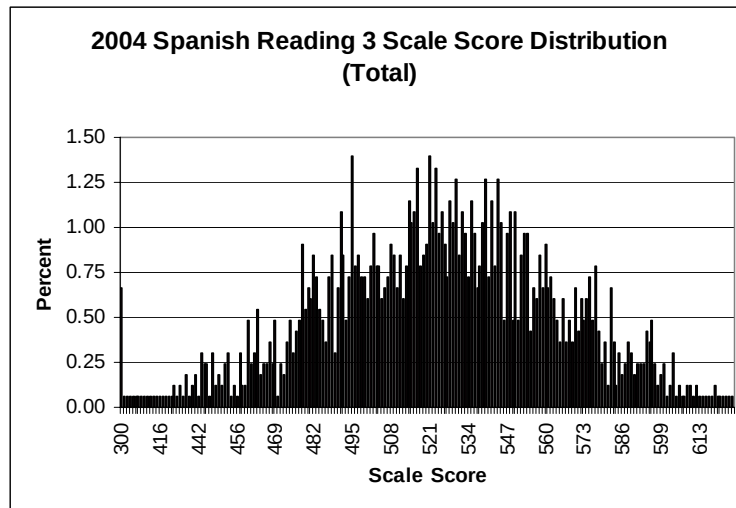
(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
300	11	.67	11	0.67	461	4	0.24	104	6.30	505	10	0.61	526	31.84
376	1	.06	12	0.73	462	5	0.30	109	6.60	506	11	0.67	537	32.51
378	1	.06	13	0.79	463	9	0.54	118	7.14	507	12	0.73	549	33.23
388	1	.06	14	0.85	464	3	0.18	121	7.32	508	15	0.91	564	34.14
394	1	.06	15	0.91	465	4	0.24	125	7.57	509	14	0.85	578	34.99
396	1	.06	16	0.97	466	4	0.24	129	7.81	510	11	0.67	589	35.65
397	1	.06	17	1.03	467	6	0.36	135	8.17	511	14	0.85	603	36.50
399	1	.06	18	1.09	468	4	0.24	139	8.41	512	10	0.61	613	37.11
406	1	.06	19	1.15	469	8	0.48	147	8.90	513	13	0.79	626	37.89
409	1	.06	20	1.21	470	1	0.06	148	8.96	514	19	1.15	645	39.04
412	1	.06	21	1.27	471	4	0.24	152	9.20	515	17	1.03	662	40.07
414	1	.06	22	1.33	472	3	0.18	155	9.38	516	18	1.09	680	41.16
415	1	.06	23	1.39	473	6	0.36	161	9.75	517	22	1.33	702	42.49
416	1	.06	24	1.45	474	8	0.48	169	10.23	518	13	0.79	715	43.28
423	1	.06	25	1.51	475	5	0.30	174	10.53	519	14	0.85	729	44.13
426	1	.06	26	1.57	476	7	0.42	181	10.96	520	15	0.91	744	45.04
427	1	.06	27	1.63	477	8	0.48	189	11.44	521	23	1.39	767	46.43
429	1	.06	28	1.69	478	15	0.91	204	12.35	522	17	1.03	784	47.46
430	2	.12	30	1.82	479	9	0.54	213	12.89	523	22	1.33	806	48.79
431	1	.06	31	1.88	480	11	0.67	224	13.56	524	16	0.97	822	49.76
433	2	.12	33	2.00	481	10	0.61	234	14.16	525	18	1.09	840	50.85
434	1	.06	34	2.06	482	14	0.85	248	15.01	526	15	0.91	855	51.76
435	3	.18	37	2.24	483	12	0.73	260	15.74	527	12	0.73	867	52.48
436	1	.06	38	2.30	484	9	0.54	269	16.28	528	19	1.15	886	53.63
438	2	.12	40	2.42	485	8	0.48	277	16.77	529	17	1.03	903	54.66
440	3	.18	43	2.60	486	6	0.36	283	17.13	530	21	1.27	924	55.93
442	1	.06	44	2.66	487	12	0.73	295	17.86	531	14	0.85	938	56.78
444	5	.30	49	2.97	488	14	0.85	309	18.70	532	18	1.09	956	57.87
445	4	.24	53	3.21	489	5	0.30	314	19.01	533	16	0.97	972	58.84
446	4	.24	57	3.45	490	11	0.67	325	19.67	534	12	0.73	984	59.56
447	1	.06	58	3.51	491	18	1.09	343	20.76	535	19	1.15	1003	60.71
448	5	.30	63	3.81	492	14	0.85	357	21.61	536	16	0.97	1019	61.68
449	2	.12	65	3.93	493	8	0.48	365	22.09	537	11	0.67	1030	62.35
450	3	.18	68	4.12	494	12	0.73	377	22.82	538	13	0.79	1043	63.14
451	2	.12	70	4.24	495	23	1.39	400	24.21	539	17	1.03	1060	64.16
452	4	.24	74	4.48	496	13	0.79	413	25.00	540	21	1.27	1081	65.44
453	5	.30	79	4.78	497	14	0.85	427	25.85	541	12	0.73	1093	66.16
454	1	.06	80	4.84	498	12	0.73	439	26.57	542	19	1.15	1112	67.31
455	2	.12	82	4.96	499	12	0.73	451	27.30	543	13	0.79	1125	68.10
456	1	.06	83	5.02	500	10	0.61	461	27.91	544	21	1.27	1146	69.37
457	5	.30	88	5.33	501	13	0.79	474	28.69	545	17	1.03	1163	70.40
458	2	.12	90	5.45	502	16	0.97	490	29.66	546	8	0.48	1171	70.88
459	2	.12	92	5.57	503	13	0.79	503	30.45	547	16	0.97	1187	71.85
460	8	.48	100	6.05	504	13	0.79	516	31.23	548	18	1.09	1205	72.94

Appendix 2. Spanish Reading 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
549	8	0.48	1213	73.43	575	12	0.73	1488	90.07	601	1	0.06	1620	98.06
550	18	1.09	1231	74.52	576	8	0.48	1496	90.56	602	2	0.12	1622	98.18
551	8	0.48	1239	75.00	577	13	0.79	1509	91.34	603	5	0.30	1627	98.49
552	14	0.85	1253	75.85	578	7	0.42	1516	91.77	604	1	0.06	1628	98.55
553	16	0.97	1269	76.82	579	4	0.24	1520	92.01	605	2	0.12	1630	98.67
554	16	0.97	1285	77.78	580	6	0.36	1526	92.37	606	1	0.06	1631	98.73
555	7	0.42	1292	78.21	581	2	0.12	1528	92.49	607	1	0.06	1632	98.79
556	11	0.67	1303	78.87	582	11	0.67	1539	93.16	608	2	0.12	1634	98.91
557	10	0.61	1313	79.48	583	6	0.36	1545	93.52	609	2	0.12	1636	99.03
558	14	0.85	1327	80.33	584	2	0.12	1547	93.64	611	1	0.06	1637	99.09
559	11	0.67	1338	80.99	585	5	0.30	1552	93.95	612	2	0.12	1639	99.21
560	15	0.91	1353	81.90	586	3	0.18	1555	94.13	613	1	0.06	1640	99.27
561	11	0.67	1364	82.57	587	4	0.24	1559	94.37	614	1	0.06	1641	99.33
562	12	0.73	1376	83.29	588	6	0.36	1565	94.73	616	1	0.06	1642	99.39
563	10	0.61	1386	83.90	589	5	0.30	1570	95.04	618	1	0.06	1643	99.46
564	8	0.48	1394	84.38	590	3	0.18	1573	95.22	620	1	0.06	1644	99.52
565	6	0.36	1400	84.75	591	4	0.24	1577	95.46	621	2	0.12	1646	99.64
566	10	0.61	1410	85.35	592	4	0.24	1581	95.70	623	1	0.06	1647	99.70
567	6	0.36	1416	85.71	593	4	0.24	1585	95.94	628	1	0.06	1648	99.76
568	8	0.48	1424	86.20	594	7	0.42	1592	96.37	631	1	0.06	1649	99.82
569	6	0.36	1430	86.56	595	6	0.36	1598	96.73	634	1	0.06	1650	99.88
570	11	0.67	1441	87.23	596	8	0.48	1606	97.22	635	1	0.06	1651	99.94
571	7	0.42	1448	87.65	597	4	0.24	1610	97.46	674	1	0.06	1652	100.00
572	10	0.61	1458	88.26	598	2	0.12	1612	97.58					
573	8	0.48	1466	88.74	599	3	0.18	1615	97.76					
574	10	0.61	1476	89.35	600	4	0.24	1619	98.00					

**Figure 2. Spanish Reading 3 Scale Score Distributions
for the Total Population, Female, and Male Students**



Appendix 3. Writing 3 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
150	59	.11	59	0.11	286	1	.00	130	0.25	331	9	.02	377	0.72
167	1	.00	60	0.11	287	2	.00	132	0.25	332	14	.03	391	0.74
220	1	.00	61	0.12	288	1	.00	133	0.25	333	16	.03	407	0.77
222	1	.00	62	0.12	289	2	.00	135	0.26	334	14	.03	421	0.80
224	1	.00	63	0.12	290	5	.01	140	0.27	335	11	.02	432	0.82
230	2	.00	65	0.12	291	4	.01	144	0.27	336	14	.03	446	0.85
231	1	.00	66	0.13	292	3	.01	147	0.28	337	15	.03	461	0.88
233	2	.00	68	0.13	293	5	.01	152	0.29	338	12	.02	473	0.90
234	1	.00	69	0.13	294	2	.00	154	0.29	339	26	.05	499	0.95
235	1	.00	70	0.13	295	2	.00	156	0.30	340	16	.03	515	0.98
236	1	.00	71	0.13	296	5	.01	161	0.31	341	18	.03	533	1.01
239	1	.00	72	0.14	298	1	.00	162	0.31	342	23	.04	556	1.06
240	1	.00	73	0.14	299	3	.01	165	0.31	343	26	.05	582	1.11
242	2	.00	75	0.14	300	1	.00	166	0.32	344	18	.03	600	1.14
245	1	.00	76	0.14	301	2	.00	168	0.32	345	22	.04	622	1.18
247	1	.00	77	0.15	302	5	.01	173	0.33	346	13	.02	635	1.21
248	1	.00	78	0.15	303	6	.01	179	0.34	347	25	.05	660	1.25
251	2	.00	80	0.15	304	3	.01	182	0.35	348	32	.06	692	1.31
252	1	.00	81	0.15	305	5	.01	187	0.36	349	25	.05	717	1.36
253	1	.00	82	0.16	306	3	.01	190	0.36	350	16	.03	733	1.39
255	1	.00	83	0.16	307	6	.01	196	0.37	351	29	.06	762	1.45
256	2	.00	85	0.16	308	4	.01	200	0.38	352	24	.05	786	1.49
257	1	.00	86	0.16	309	6	.01	206	0.39	353	29	.06	815	1.55
258	2	.00	88	0.17	310	3	.01	209	0.40	354	29	.06	844	1.60
260	3	.01	91	0.17	311	7	.01	216	0.41	355	23	.04	867	1.65
262	2	.00	93	0.18	312	3	.01	219	0.42	356	38	.07	905	1.72
263	1	.00	94	0.18	313	7	.01	226	0.43	357	30	.06	935	1.78
264	1	.00	95	0.18	314	7	.01	233	0.44	358	26	.05	961	1.82
265	1	.00	96	0.18	315	9	.02	242	0.46	359	29	.06	990	1.88
267	3	.01	99	0.19	316	6	.01	248	0.47	360	37	.07	1027	1.95
271	1	.00	100	0.19	317	7	.01	255	0.48	361	42	.08	1069	2.03
272	4	.01	104	0.20	318	4	.01	259	0.49	362	46	.09	1115	2.12
273	3	.01	107	0.20	319	9	.02	268	0.51	363	42	.08	1157	2.20
274	1	.00	108	0.21	320	8	.02	276	0.52	364	53	.10	1210	2.30
275	3	.01	111	0.21	321	7	.01	283	0.54	365	51	.10	1261	2.39
277	2	.00	113	0.21	322	10	.02	293	0.56	366	51	.10	1312	2.49
278	2	.00	115	0.22	323	9	.02	302	0.57	367	68	.13	1380	2.62
279	3	.01	118	0.22	324	7	.01	309	0.59	368	56	.11	1436	2.73
280	2	.00	120	0.23	325	8	.02	317	0.60	369	62	.12	1498	2.84
281	2	.00	122	0.23	326	9	.02	326	0.62	370	52	.10	1550	2.94
282	1	.00	123	0.23	327	10	.02	336	0.64	371	58	.11	1608	3.05
283	2	.00	125	0.24	328	10	.02	346	0.66	372	79	.15	1687	3.20
284	3	.01	128	0.24	329	8	.02	354	0.67	373	62	.12	1749	3.32
285	1	.00	129	0.24	330	14	.03	368	0.70	374	66	.13	1815	3.45

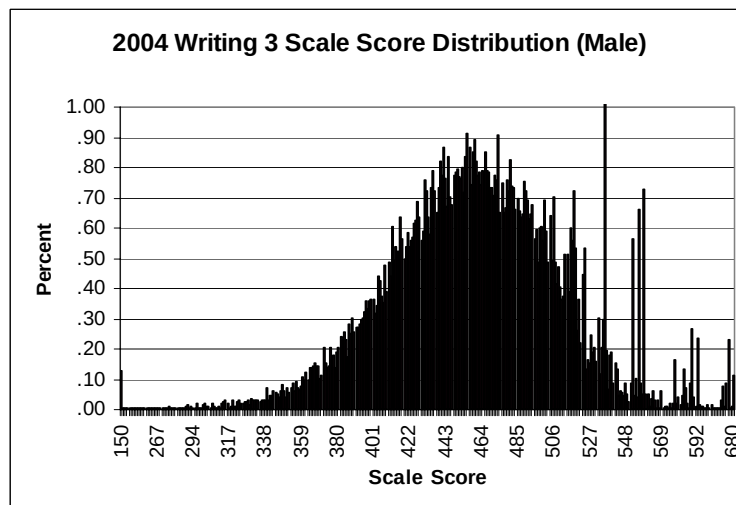
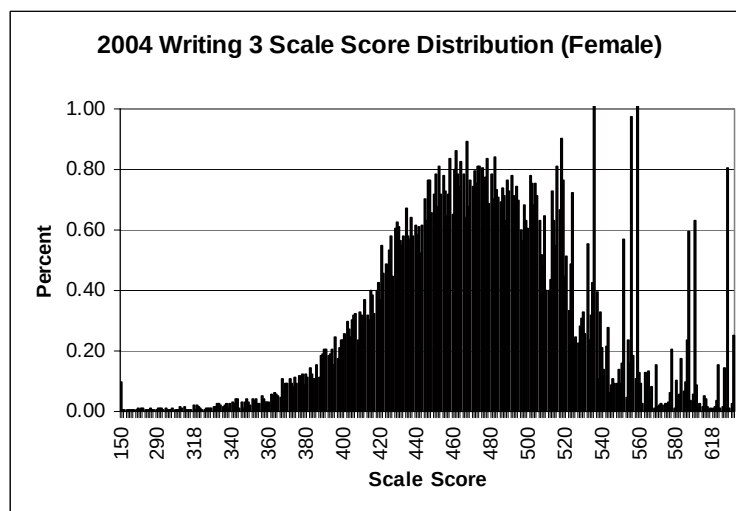
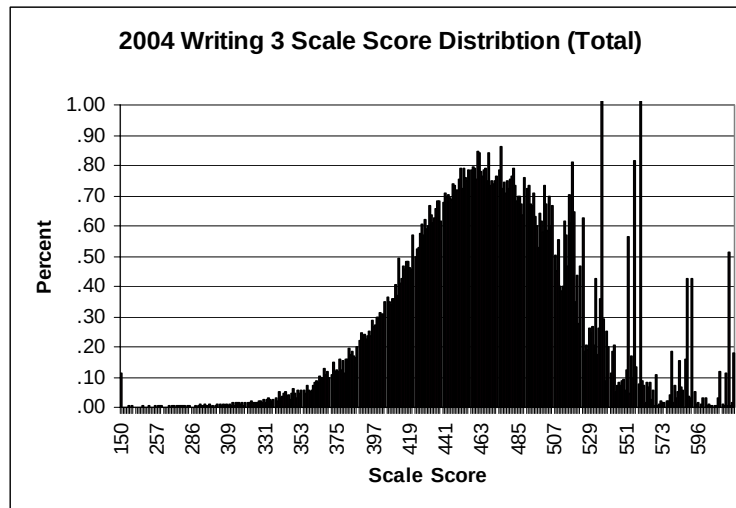
Appendix 3. Writing 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
375	62	.12	1877	3.56	420	241	.46	8843	16.79	465	415	.79	25270	47.98
376	85	.16	1962	3.73	421	299	.57	9142	17.36	466	395	.75	25665	48.73
377	66	.13	2028	3.85	422	263	.50	9405	17.86	467	442	.84	26107	49.57
378	80	.15	2108	4.00	423	276	.52	9681	18.38	468	385	.73	26492	50.30
379	60	.11	2168	4.12	424	278	.53	9959	18.91	469	395	.75	26887	51.05
380	83	.16	2251	4.27	425	303	.58	10262	19.48	470	390	.74	27277	51.79
381	84	.16	2335	4.43	426	318	.60	10580	20.09	471	395	.75	27672	52.54
382	102	.19	2437	4.63	427	300	.57	10880	20.66	472	403	.77	28075	53.31
383	93	.18	2530	4.80	428	327	.62	11207	21.28	473	413	.78	28488	54.09
384	97	.18	2627	4.99	429	311	.59	11518	21.87	474	454	.86	28942	54.95
385	90	.17	2717	5.16	430	316	.60	11834	22.47	475	382	.73	29324	55.68
386	87	.17	2804	5.32	431	350	.66	12184	23.13	476	392	.74	29716	56.42
387	105	.20	2909	5.52	432	336	.64	12520	23.77	477	374	.71	30090	57.13
388	115	.22	3024	5.74	433	321	.61	12841	24.38	478	394	.75	30484	57.88
389	130	.25	3154	5.99	434	329	.62	13170	25.01	479	382	.73	30866	58.60
390	121	.23	3275	6.22	435	347	.66	13517	25.66	480	396	.75	31262	59.36
391	127	.24	3402	6.46	436	360	.68	13877	26.35	481	403	.77	31665	60.12
392	120	.23	3522	6.69	437	360	.68	14237	27.03	482	415	.79	32080	60.91
393	125	.24	3647	6.92	438	324	.62	14561	27.65	483	386	.73	32466	61.64
394	133	.25	3780	7.18	439	356	.68	14917	28.32	484	360	.68	32826	62.33
395	123	.23	3903	7.41	440	372	.71	15289	29.03	485	366	.69	33192	63.02
396	150	.28	4053	7.70	441	366	.69	15655	29.72	486	366	.69	33558	63.72
397	141	.27	4194	7.96	442	369	.70	16024	30.42	487	354	.67	33912	64.39
398	144	.27	4338	8.24	443	364	.69	16388	31.12	488	336	.64	34248	65.03
399	157	.30	4495	8.53	444	362	.69	16750	31.80	489	399	.76	34647	65.78
400	158	.30	4653	8.83	445	388	.74	17138	32.54	490	381	.72	35028	66.51
401	164	.31	4817	9.15	446	385	.73	17523	33.27	491	386	.73	35414	67.24
402	162	.31	4979	9.45	447	378	.72	17901	33.99	492	353	.67	35767	67.91
403	162	.31	5141	9.76	448	379	.72	18280	34.71	493	351	.67	36118	68.58
404	183	.35	5324	10.11	449	397	.75	18677	35.46	494	374	.71	36492	69.29
405	192	.36	5516	10.47	450	416	.79	19093	36.25	495	331	.63	36823	69.92
406	183	.35	5699	10.82	451	381	.72	19474	36.98	496	315	.60	37138	70.51
407	179	.34	5878	11.16	452	415	.79	19889	37.76	497	277	.53	37415	71.04
408	190	.36	6068	11.52	453	400	.76	20289	38.52	498	337	.64	37752	71.68
409	190	.36	6258	11.88	454	394	.75	20683	39.27	499	325	.62	38077	72.30
410	214	.41	6472	12.29	455	413	.78	21096	40.05	500	306	.58	38383	72.88
411	194	.37	6666	12.66	456	412	.78	21508	40.84	501	386	.73	38769	73.61
412	258	.49	6924	13.15	457	419	.80	21927	41.63	502	353	.67	39122	74.28
413	215	.41	7139	13.55	458	415	.79	22342	42.42	503	307	.58	39429	74.86
414	223	.42	7362	13.98	459	397	.75	22739	43.17	504	366	.69	39795	75.56
415	245	.47	7607	14.44	460	446	.85	23185	44.02	505	315	.60	40110	76.16
416	241	.46	7848	14.90	461	443	.84	23628	44.86	506	351	.67	40461	76.82
417	255	.48	8103	15.39	462	411	.78	24039	45.64	507	264	.50	40725	77.32
418	255	.48	8358	15.87	463	403	.77	24442	46.41	508	237	.45	40962	77.77
419	244	.46	8602	16.33	464	413	.78	24855	47.19	509	293	.56	41255	78.33

Appendix 3. Writing 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
510	211	.40	41466	78.73	546	42	.08	48969	92.98	582	27	.05	51322	97.44
511	202	.38	41668	79.11	547	37	.07	49006	93.05	583	81	.15	51403	97.60
512	212	.40	41880	79.52	548	46	.09	49052	93.13	584	36	.07	51439	97.67
513	325	.62	42205	80.13	549	49	.09	49101	93.23	585	30	.06	51469	97.72
514	301	.57	42506	80.71	550	31	.06	49132	93.29	586	1	.00	51470	97.73
515	247	.47	42753	81.17	551	64	.12	49196	93.41	587	84	.16	51554	97.88
516	371	.70	43124	81.88	552	298	.57	49494	93.97	588	224	.43	51778	98.31
517	322	.61	43446	82.49	553	25	.05	49519	94.02	589	20	.04	51798	98.35
518	427	.81	43873	83.30	554	88	.17	49607	94.19	590	17	.03	51815	98.38
519	341	.65	44214	83.95	555	52	.10	49659	94.29	592	225	.43	52040	98.81
520	185	.35	44399	84.30	556	429	.81	50088	95.10	593	26	.05	52066	98.86
521	230	.44	44629	84.74	557	70	.13	50158	95.23	594	6	.01	52072	98.87
522	145	.28	44774	85.01	558	41	.08	50199	95.31	595	9	.02	52081	98.89
523	246	.47	45020	85.48	559	543	1.03	50742	96.34	596	1	.00	52082	98.89
524	329	.62	45349	86.10	560	47	.09	50789	96.43	598	6	.01	52088	98.90
525	97	.18	45446	86.29	561	38	.07	50827	96.50	599	17	.03	52105	98.93
526	108	.21	45554	86.49	562	9	.02	50836	96.52	600	1	.00	52106	98.93
527	99	.19	45653	86.68	563	43	.08	50879	96.60	601	15	.03	52121	98.96
528	139	.26	45792	86.94	564	34	.06	50913	96.67	603	2	.00	52123	98.97
529	130	.25	45922	87.19	565	42	.08	50955	96.75	607	5	.01	52128	98.97
530	140	.27	46062	87.46	566	13	.02	50968	96.77	611	3	.01	52131	98.98
531	109	.21	46171	87.66	567	29	.06	50997	96.83	613	4	.01	52135	98.99
532	224	.43	46395	88.09	568	3	.01	51000	96.83	617	1	.00	52136	98.99
533	92	.17	46487	88.26	569	56	.11	51056	96.94	618	3	.01	52139	99.00
534	138	.26	46625	88.53	570	4	.01	51060	96.95	619	4	.01	52143	99.00
535	189	.36	46814	88.89	571	6	.01	51066	96.96	622	17	.03	52160	99.04
536	1346	2.56	48160	91.44	572	10	.02	51076	96.98	624	61	.12	52221	99.15
537	154	.29	48314	91.73	573	8	.02	51084	96.99	625	5	.01	52226	99.16
538	46	.09	48360	91.82	574	9	.02	51093	97.01	627	4	.01	52230	99.17
539	133	.25	48493	92.07	575	11	.02	51104	97.03	632	60	.11	52290	99.28
540	105	.20	48598	92.27	576	10	.02	51114	97.05	633	2	.00	52292	99.29
541	59	.11	48657	92.38	577	22	.04	51136	97.09	642	269	.51	52561	99.80
542	97	.18	48754	92.57	578	97	.18	51233	97.28	643	4	.01	52565	99.80
543	107	.20	48861	92.77	579	8	.02	51241	97.29	647	9	.02	52574	99.82
544	28	.05	48889	92.82	580	37	.07	51278	97.36	680	94	.18	52668	100.00
545	38	.07	48927	92.90	581	17	.03	51295	97.39					

Figure 3. Writing 3 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 4. Spanish Writing 3 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
250	3	.18	3	0.18	394	1	.06	58	3.48	439	4	.24	233	13.97
265	1	.06	4	0.24	395	3	.18	61	3.66	440	10	.60	243	14.57
291	1	.06	5	0.30	396	2	.12	63	3.78	441	4	.24	247	14.81
293	1	.06	6	0.36	397	6	.36	69	4.14	442	8	.48	255	15.29
306	1	.06	7	0.42	398	5	.30	74	4.44	443	11	.66	266	15.95
308	1	.06	8	0.48	399	5	.30	79	4.74	444	5	.30	271	16.25
313	1	.06	9	0.54	400	1	.06	80	4.80	445	10	.60	281	16.85
319	1	.06	10	0.60	401	1	.06	81	4.86	446	7	.42	288	17.27
320	1	.06	11	0.66	402	1	.06	82	4.92	447	5	.30	293	17.57
322	1	.06	12	0.72	403	3	.18	85	5.10	448	5	.30	298	17.87
324	1	.06	13	0.78	404	4	.24	89	5.34	449	13	.78	311	18.65
331	1	.06	14	0.84	406	3	.18	92	5.52	450	7	.42	318	19.06
344	1	.06	15	0.90	407	2	.12	94	5.64	451	10	.60	328	19.66
346	1	.06	16	0.96	408	5	.30	99	5.94	452	6	.36	334	20.02
349	1	.06	17	1.02	409	4	.24	103	6.18	453	5	.30	339	20.32
352	1	.06	18	1.08	410	5	.30	108	6.47	454	6	.36	345	20.68
354	2	.12	20	1.20	411	4	.24	112	6.71	455	9	.54	354	21.22
356	1	.06	21	1.26	412	3	.18	115	6.89	456	3	.18	357	21.40
357	1	.06	22	1.32	413	3	.18	118	7.07	457	12	.72	369	22.12
358	1	.06	23	1.38	414	3	.18	121	7.25	458	10	.60	379	22.72
359	1	.06	24	1.44	415	3	.18	124	7.43	459	13	.78	392	23.50
363	1	.06	25	1.50	416	3	.18	127	7.61	460	15	.90	407	24.40
364	1	.06	26	1.56	417	4	.24	131	7.85	461	14	.84	421	25.24
365	1	.06	27	1.62	418	4	.24	135	8.09	462	14	.84	435	26.08
367	1	.06	28	1.68	419	4	.24	139	8.33	463	12	.72	447	26.80
369	1	.06	29	1.74	420	5	.30	144	8.63	464	13	.78	460	27.58
370	1	.06	30	1.80	421	1	.06	145	8.69	465	11	.66	471	28.24
371	1	.06	31	1.86	422	4	.24	149	8.93	466	2	.12	473	28.36
372	1	.06	32	1.92	423	1	.06	150	8.99	467	6	.36	479	28.72
374	2	.12	34	2.04	424	3	.18	153	9.17	468	9	.54	488	29.26
377	1	.06	35	2.10	425	6	.36	159	9.53	469	8	.48	496	29.74
378	4	.24	39	2.34	426	4	.24	163	9.77	470	17	1.02	513	30.76
380	2	.12	41	2.46	427	4	.24	167	10.01	471	4	.24	517	31.00
381	1	.06	42	2.52	428	1	.06	168	10.07	472	14	.84	531	31.83
383	1	.06	43	2.58	429	7	.42	175	10.49	473	7	.42	538	32.25
384	1	.06	44	2.64	430	9	.54	184	11.03	474	12	.72	550	32.97
385	1	.06	45	2.70	431	1	.06	185	11.09	475	15	.90	565	33.87
387	3	.18	48	2.88	432	5	.30	190	11.39	476	14	.84	579	34.71
388	2	.12	50	3.00	433	11	.66	201	12.05	477	14	.84	593	35.55
389	1	.06	51	3.06	434	6	.36	207	12.41	478	12	.72	605	36.27
390	1	.06	52	3.12	435	6	.36	213	12.77	479	8	.48	613	36.75
391	2	.12	54	3.24	436	5	.30	218	13.07	480	8	.48	621	37.23
392	2	.12	56	3.36	437	6	.36	224	13.43	481	6	.36	627	37.59
393	1	.06	57	3.42	438	5	.30	229	13.73	482	11	.66	638	38.25

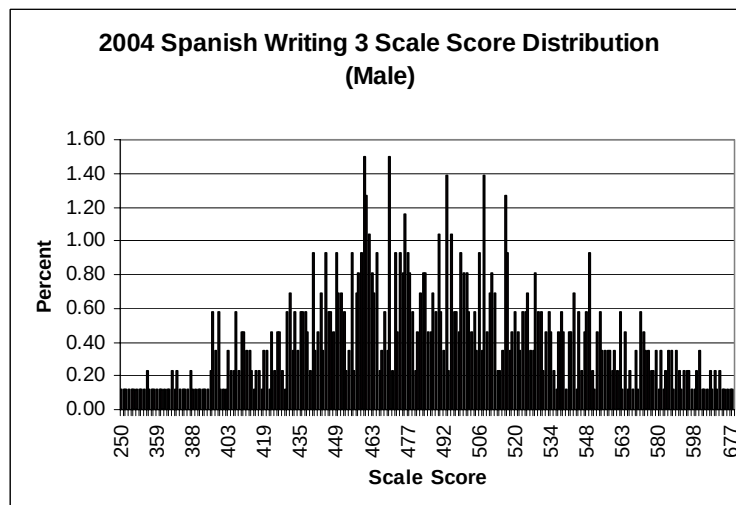
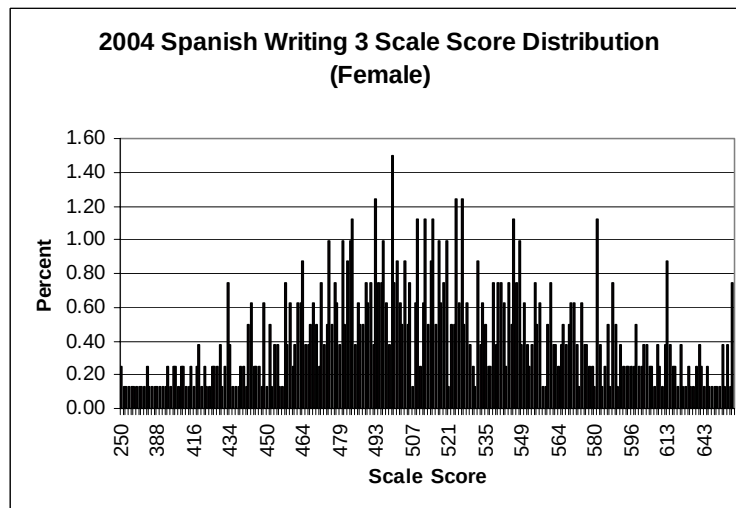
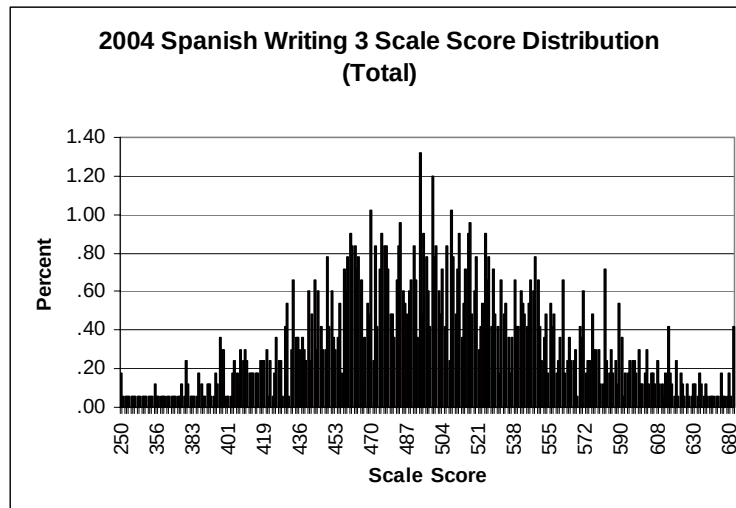
Appendix 4. Spanish Writing 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
483	14	.84	652	39.09	528	12	.72	1157	69.36	573	4	.24	1464	87.77
484	16	.96	668	40.05	529	8	.48	1165	69.84	574	4	.24	1468	88.01
485	10	.60	678	40.65	530	7	.42	1172	70.26	575	8	.48	1476	88.49
486	9	.54	687	41.19	531	3	.18	1175	70.44	576	5	.30	1481	88.79
487	8	.48	695	41.67	532	11	.66	1186	71.10	577	5	.30	1486	89.09
488	10	.60	705	42.27	533	8	.48	1194	71.58	578	5	.30	1491	89.39
489	11	.66	716	42.93	534	9	.54	1203	72.12	579	2	.12	1493	89.51
490	14	.84	730	43.76	535	6	.36	1209	72.48	580	2	.12	1495	89.63
491	11	.66	741	44.42	536	3	.18	1212	72.66	581	12	.72	1507	90.35
492	6	.36	747	44.78	537	6	.36	1218	73.02	582	4	.24	1511	90.59
493	22	1.32	769	46.10	538	11	.66	1229	73.68	583	3	.18	1514	90.77
494	8	.48	777	46.58	539	7	.42	1236	74.10	584	5	.30	1519	91.07
495	15	.90	792	47.48	540	7	.42	1243	74.52	585	3	.18	1522	91.25
496	13	.78	805	48.26	541	10	.60	1253	75.12	586	4	.24	1526	91.49
497	10	.60	815	48.86	542	9	.54	1262	75.66	587	2	.12	1528	91.61
498	7	.42	822	49.28	543	8	.48	1270	76.14	589	9	.54	1537	92.15
499	20	1.20	842	50.48	544	7	.42	1277	76.56	590	6	.36	1543	92.51
500	13	.78	855	51.26	545	9	.54	1286	77.10	591	1	.06	1544	92.57
501	14	.84	869	52.10	546	11	.66	1297	77.76	592	3	.18	1547	92.75
502	10	.60	879	52.70	547	10	.60	1307	78.36	593	3	.18	1550	92.93
503	8	.48	887	53.18	548	13	.78	1320	79.14	594	4	.24	1554	93.17
504	12	.72	899	53.90	549	11	.66	1331	79.80	595	4	.24	1558	93.41
505	7	.42	906	54.32	550	7	.42	1338	80.22	596	4	.24	1562	93.65
506	14	.84	920	55.16	551	4	.24	1342	80.46	597	3	.18	1565	93.82
507	4	.24	924	55.40	552	6	.36	1348	80.82	598	5	.30	1570	94.12
508	17	1.02	941	56.41	553	8	.48	1356	81.29	600	2	.12	1572	94.24
509	13	.78	954	57.19	554	3	.18	1359	81.47	601	2	.12	1574	94.36
510	8	.48	962	57.67	555	9	.54	1368	82.01	602	3	.18	1577	94.54
511	12	.72	974	58.39	556	7	.42	1375	82.43	603	5	.30	1582	94.84
512	15	.90	989	59.29	557	8	.48	1383	82.91	604	2	.12	1584	94.96
513	6	.36	995	59.65	558	3	.18	1386	83.09	605	3	.18	1587	95.14
514	9	.54	1004	60.19	559	4	.24	1390	83.33	606	3	.18	1590	95.32
515	12	.72	1016	60.91	560	6	.36	1396	83.69	607	2	.12	1592	95.44
516	15	.90	1031	61.81	561	11	.66	1407	84.35	608	4	.24	1596	95.68
517	16	.96	1047	62.77	562	3	.18	1410	84.53	609	2	.12	1598	95.80
518	8	.48	1055	63.25	563	4	.24	1414	84.77	610	2	.12	1600	95.92
519	10	.60	1065	63.85	564	6	.36	1420	85.13	611	1	.06	1601	95.98
520	13	.78	1078	64.63	565	4	.24	1424	85.37	612	3	.18	1604	96.16
521	5	.30	1083	64.93	566	4	.24	1428	85.61	613	7	.42	1611	96.58
522	7	.42	1090	65.35	567	5	.30	1433	85.91	615	3	.18	1614	96.76
523	9	.54	1099	65.89	568	1	.06	1434	85.97	616	2	.12	1616	96.88
524	15	.90	1114	66.79	569	7	.42	1441	86.39	617	1	.06	1617	96.94
525	11	.66	1125	67.45	570	6	.36	1447	86.75	618	4	.24	1621	97.18
526	13	.78	1138	68.23	571	10	.60	1457	87.35	619	1	.06	1622	97.24
527	7	.42	1145	68.65	572	3	.18	1460	87.53	620	3	.18	1625	97.42

Appendix 4. Spanish Writing 3 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
621	2	.12	1627	97.54	641	2	.12	1642	98.44	670	1	.06	1651	98.98
622	1	.06	1628	97.60	643	1	.06	1643	98.50	671	3	.18	1654	99.16
623	2	.12	1630	97.72	647	2	.12	1645	98.62	673	1	.06	1655	99.22
624	1	.06	1631	97.78	650	1	.06	1646	98.68	674	1	.06	1656	99.28
626	1	.06	1632	97.84	656	1	.06	1647	98.74	677	1	.06	1657	99.34
630	2	.12	1634	97.96	658	1	.06	1648	98.80	680	3	.18	1660	99.52
632	2	.12	1636	98.08	665	1	.06	1649	98.86	683	1	.06	1661	99.58
635	1	.06	1637	98.14	668	1	.06	1650	98.92	750	7	.42	1668	100.00
637	3	.18	1640	98.32										

Figure 4. Spanish Writing 3 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 5. Reading 4 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
180	240	.44	240	0.44	354	3	.01	306	0.56	399	7	.01	465	0.85
191	1	.00	241	0.44	355	4	.01	310	0.57	400	3	.01	468	0.86
227	1	.00	242	0.44	356	3	.01	313	0.57	401	5	.01	473	0.87
252	1	.00	243	0.45	357	2	.00	315	0.58	402	9	.02	482	0.88
254	1	.00	244	0.45	358	4	.01	319	0.59	403	14	.03	496	0.91
268	1	.00	245	0.45	359	2	.00	321	0.59	404	8	.01	504	0.92
279	1	.00	246	0.45	360	4	.01	325	0.60	405	10	.02	514	0.94
283	1	.00	247	0.45	361	1	.00	326	0.60	406	4	.01	518	0.95
286	1	.00	248	0.45	362	2	.00	328	0.60	407	8	.01	526	0.96
287	1	.00	249	0.46	363	1	.00	329	0.60	408	5	.01	531	0.97
298	1	.00	250	0.46	364	2	.00	331	0.61	409	4	.01	535	0.98
302	1	.00	251	0.46	366	3	.01	334	0.61	410	7	.01	542	0.99
311	1	.00	252	0.46	367	5	.01	339	0.62	411	5	.01	547	1.00
312	1	.00	253	0.46	368	1	.00	340	0.62	412	7	.01	554	1.02
313	2	.00	255	0.47	369	5	.01	345	0.63	413	9	.02	563	1.03
314	1	.00	256	0.47	370	1	.00	346	0.63	414	10	.02	573	1.05
315	1	.00	257	0.47	371	6	.01	352	0.65	415	7	.01	580	1.06
318	2	.00	259	0.48	372	3	.01	355	0.65	416	4	.01	584	1.07
320	1	.00	260	0.48	373	4	.01	359	0.66	417	4	.01	588	1.08
322	2	.00	262	0.48	374	2	.00	361	0.66	418	12	.02	600	1.10
324	3	.01	265	0.49	375	2	.00	363	0.67	419	9	.02	609	1.12
325	1	.00	266	0.49	376	3	.01	366	0.67	420	11	.02	620	1.14
326	1	.00	267	0.49	377	6	.01	372	0.68	421	12	.02	632	1.16
327	1	.00	268	0.49	378	4	.01	376	0.69	422	9	.02	641	1.18
328	1	.00	269	0.49	379	1	.00	377	0.69	423	10	.02	651	1.19
329	1	.00	270	0.50	380	4	.01	381	0.70	424	7	.01	658	1.21
333	1	.00	271	0.50	381	5	.01	386	0.71	425	11	.02	669	1.23
334	3	.01	274	0.50	382	2	.00	388	0.71	426	12	.02	681	1.25
335	1	.00	275	0.50	383	3	.01	391	0.72	427	13	.02	694	1.27
336	1	.00	276	0.51	384	4	.01	395	0.72	428	7	.01	701	1.29
337	3	.01	279	0.51	385	4	.01	399	0.73	429	15	.03	716	1.31
338	3	.01	282	0.52	386	6	.01	405	0.74	430	16	.03	732	1.34
339	2	.00	284	0.52	387	2	.00	407	0.75	431	24	.04	756	1.39
340	1	.00	285	0.52	388	2	.00	409	0.75	432	21	.04	777	1.43
341	2	.00	287	0.53	389	2	.00	411	0.75	433	19	.03	796	1.46
342	2	.00	289	0.53	390	7	.01	418	0.77	434	15	.03	811	1.49
343	2	.00	291	0.53	391	4	.01	422	0.77	435	28	.05	839	1.54
344	1	.00	292	0.54	392	3	.01	425	0.78	436	21	.04	860	1.58
345	1	.00	293	0.54	393	5	.01	430	0.79	437	13	.02	873	1.60
346	1	.00	294	0.54	394	3	.01	433	0.79	438	22	.04	895	1.64
347	3	.01	297	0.54	395	10	.02	443	0.81	439	24	.04	919	1.69
348	3	.01	300	0.55	396	3	.01	446	0.82	440	20	.04	939	1.72
351	2	.00	302	0.55	397	8	.01	454	0.83	441	19	.03	958	1.76
352	1	.00	303	0.56	398	4	.01	458	0.84	442	24	.04	982	1.80

Appendix 5. Reading 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
443	21	.04	1003	1.84	488	82	.15	3104	5.69	533	201	.37	8950	16.42
444	23	.04	1026	1.88	489	78	.14	3182	5.84	534	193	.35	9143	16.77
445	23	.04	1049	1.92	490	75	.14	3257	5.97	535	168	.31	9311	17.08
446	33	.06	1082	1.98	491	84	.15	3341	6.13	536	214	.39	9525	17.47
447	29	.05	1111	2.04	492	81	.15	3422	6.28	537	213	.39	9738	17.86
448	27	.05	1138	2.09	493	88	.16	3510	6.44	538	230	.42	9968	18.28
449	27	.05	1165	2.14	494	105	.19	3615	6.63	539	207	.38	10175	18.66
450	29	.05	1194	2.19	495	96	.18	3711	6.81	540	227	.42	10402	19.08
451	39	.07	1233	2.26	496	86	.16	3797	6.96	541	230	.42	10632	19.50
452	29	.05	1262	2.31	497	96	.18	3893	7.14	542	234	.43	10866	19.93
453	29	.05	1291	2.37	498	92	.17	3985	7.31	543	246	.45	11112	20.38
454	38	.07	1329	2.44	499	110	.20	4095	7.51	544	254	.47	11366	20.85
455	40	.07	1369	2.51	500	94	.17	4189	7.68	545	246	.45	11612	21.30
456	46	.08	1415	2.60	501	107	.20	4296	7.88	546	255	.47	11867	21.77
457	42	.08	1457	2.67	502	95	.17	4391	8.05	547	246	.45	12113	22.22
458	49	.09	1506	2.76	503	109	.20	4500	8.25	548	260	.48	12373	22.70
459	39	.07	1545	2.83	504	128	.23	4628	8.49	549	260	.48	12633	23.17
460	33	.06	1578	2.89	505	108	.20	4736	8.69	550	273	.50	12906	23.67
461	42	.08	1620	2.97	506	116	.21	4852	8.90	551	264	.48	13170	24.16
462	36	.07	1656	3.04	507	125	.23	4977	9.13	552	275	.50	13445	24.66
463	44	.08	1700	3.12	508	108	.20	5085	9.33	553	272	.50	13717	25.16
464	46	.08	1746	3.20	509	121	.22	5206	9.55	554	294	.54	14011	25.70
465	49	.09	1795	3.29	510	132	.24	5338	9.79	555	292	.54	14303	26.24
466	35	.06	1830	3.36	511	141	.26	5479	10.05	556	303	.56	14606	26.79
467	50	.09	1880	3.45	512	127	.23	5606	10.28	557	311	.57	14917	27.36
468	46	.08	1926	3.53	513	140	.26	5746	10.54	558	285	.52	15202	27.88
469	38	.07	1964	3.60	514	123	.23	5869	10.77	559	309	.57	15511	28.45
470	63	.12	2027	3.72	515	146	.27	6015	11.03	560	351	.64	15862	29.10
471	46	.08	2073	3.80	516	128	.23	6143	11.27	561	297	.54	16159	29.64
472	54	.10	2127	3.90	517	132	.24	6275	11.51	562	306	.56	16465	30.20
473	51	.09	2178	4.00	518	128	.23	6403	11.74	563	282	.52	16747	30.72
474	49	.09	2227	4.08	519	147	.27	6550	12.01	564	356	.65	17103	31.37
475	57	.10	2284	4.19	520	148	.27	6698	12.29	565	346	.63	17449	32.01
476	38	.07	2322	4.26	521	141	.26	6839	12.54	566	341	.63	17790	32.63
477	67	.12	2389	4.38	522	197	.36	7036	12.91	567	362	.66	18152	33.30
478	50	.09	2439	4.47	523	160	.29	7196	13.20	568	372	.68	18524	33.98
479	57	.10	2496	4.58	524	168	.31	7364	13.51	569	337	.62	18861	34.60
480	62	.11	2558	4.69	525	150	.28	7514	13.78	570	365	.67	19226	35.27
481	66	.12	2624	4.81	526	184	.34	7698	14.12	571	367	.67	19593	35.94
482	57	.10	2681	4.92	527	173	.32	7871	14.44	572	354	.65	19947	36.59
483	66	.12	2747	5.04	528	169	.31	8040	14.75	573	371	.68	20318	37.27
484	60	.11	2807	5.15	529	172	.32	8212	15.06	574	362	.66	20680	37.93
485	84	.15	2891	5.30	530	170	.31	8382	15.38	575	360	.66	21040	38.59
486	61	.11	2952	5.41	531	161	.30	8543	15.67	576	367	.67	21407	39.27
487	70	.13	3022	5.54	532	206	.38	8749	16.05	577	374	.69	21781	39.95

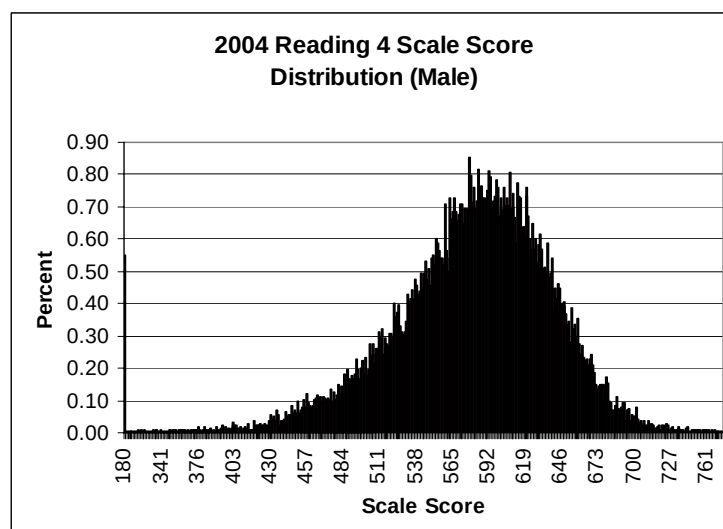
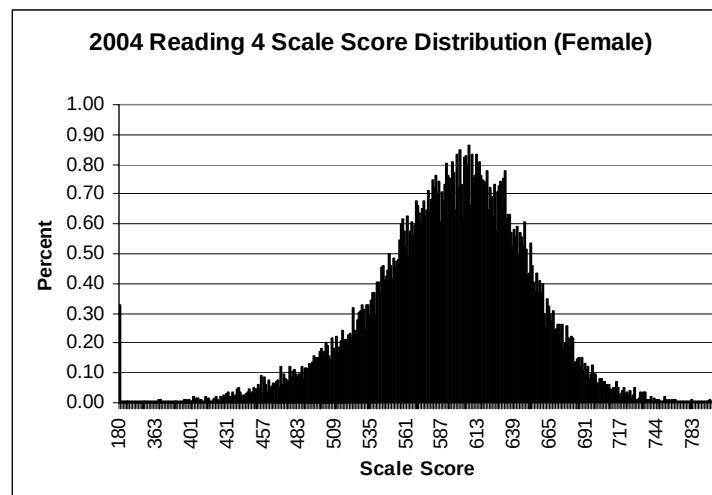
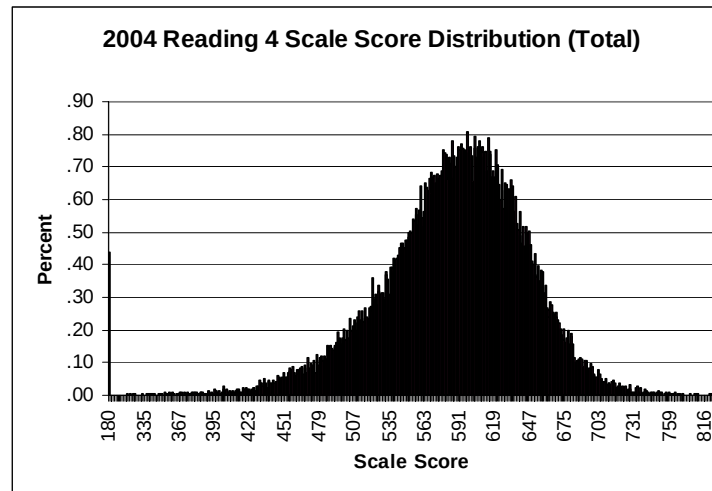
Appendix 5. Reading 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
578	409	.75	22190	40.70	623	352	.65	40145	73.64	668	139	.25	51380	94.25
579	404	.74	22594	41.44	624	326	.60	40471	74.24	669	131	.24	51511	94.49
580	397	.73	22991	42.17	625	377	.69	40848	74.93	670	125	.23	51636	94.72
581	403	.74	23394	42.91	626	312	.57	41160	75.50	671	122	.22	51758	94.94
582	363	.67	23757	43.58	627	355	.65	41515	76.15	672	111	.20	51869	95.14
583	397	.73	24154	44.31	628	341	.63	41856	76.78	673	101	.19	51970	95.33
584	387	.71	24541	45.02	629	352	.65	42208	77.42	674	110	.20	52080	95.53
585	425	.78	24966	45.79	630	345	.63	42553	78.05	675	92	.17	52172	95.70
586	362	.66	25328	46.46	631	344	.63	42897	78.69	676	88	.16	52260	95.86
587	401	.74	25729	47.19	632	359	.66	43256	79.34	677	95	.17	52355	96.03
588	382	.70	26111	47.90	633	350	.64	43606	79.99	678	109	.20	52464	96.23
589	397	.73	26508	48.62	634	309	.57	43915	80.55	679	86	.16	52550	96.39
590	414	.76	26922	49.38	635	307	.56	44222	81.12	680	98	.18	52648	96.57
591	411	.75	27333	50.14	636	332	.61	44554	81.72	681	102	.19	52750	96.76
592	410	.75	27743	50.89	637	286	.52	44840	82.25	682	85	.16	52835	96.91
593	420	.77	28163	51.66	638	277	.51	45117	82.76	683	62	.11	52897	97.03
594	412	.76	28575	52.41	639	306	.56	45423	83.32	684	56	.10	52953	97.13
595	409	.75	28984	53.17	640	266	.49	45689	83.81	685	59	.11	53012	97.24
596	406	.74	29390	53.91	641	254	.47	45943	84.27	686	55	.10	53067	97.34
597	376	.69	29766	54.60	642	281	.52	46224	84.79	687	61	.11	53128	97.45
598	440	.81	30206	55.41	643	248	.45	46472	85.24	688	63	.12	53191	97.57
599	405	.74	30611	56.15	644	281	.52	46753	85.76	689	61	.11	53252	97.68
600	414	.76	31025	56.91	645	273	.50	47026	86.26	690	48	.09	53300	97.77
601	399	.73	31424	57.64	646	251	.46	47277	86.72	691	57	.10	53357	97.87
602	358	.66	31782	58.30	647	274	.50	47551	87.22	692	56	.10	53413	97.97
603	412	.76	32194	59.05	648	251	.46	47802	87.68	693	58	.11	53471	98.08
604	432	.79	32626	59.85	649	223	.41	48025	88.09	694	31	.06	53502	98.14
605	398	.73	33024	60.58	650	218	.40	48243	88.49	695	45	.08	53547	98.22
606	416	.76	33440	61.34	651	237	.43	48480	88.93	696	53	.10	53600	98.32
607	426	.78	33866	62.12	652	201	.37	48681	89.30	697	47	.09	53647	98.40
608	402	.74	34268	62.86	653	200	.37	48881	89.66	698	36	.07	53683	98.47
609	416	.76	34684	63.62	654	216	.40	49097	90.06	699	33	.06	53716	98.53
610	407	.75	35091	64.37	655	190	.35	49287	90.41	700	31	.06	53747	98.59
611	398	.73	35489	65.10	656	209	.38	49496	90.79	701	31	.06	53778	98.64
612	408	.75	35897	65.85	657	181	.33	49677	91.12	702	43	.08	53821	98.72
613	374	.69	36271	66.53	658	207	.38	49884	91.50	703	34	.06	53855	98.79
614	431	.79	36702	67.32	659	171	.31	50055	91.82	704	23	.04	53878	98.83
615	408	.75	37110	68.07	660	184	.34	50239	92.15	705	27	.05	53905	98.88
616	402	.74	37512	68.81	661	146	.27	50385	92.42	706	23	.04	53928	98.92
617	364	.67	37876	69.48	662	143	.26	50528	92.68	707	22	.04	53950	98.96
618	376	.69	38252	70.17	663	132	.24	50660	92.93	708	27	.05	53977	99.01
619	365	.67	38617	70.83	664	155	.28	50815	93.21	709	18	.03	53995	99.04
620	411	.75	39028	71.59	665	150	.28	50965	93.48	710	19	.03	54014	99.08
621	385	.71	39413	72.29	666	139	.25	51104	93.74	711	21	.04	54035	99.12
622	380	.70	39793	72.99	667	137	.25	51241	93.99	712	18	.03	54053	99.15

Appendix 5. Reading 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
713	22	.04	54075	99.19	741	7	.01	54389	99.77	772	3	.01	54479	99.93
714	26	.05	54101	99.24	742	5	.01	54394	99.77	773	3	.01	54482	99.94
715	20	.04	54121	99.27	743	3	.01	54397	99.78	775	1	.00	54483	99.94
716	11	.02	54132	99.29	744	4	.01	54401	99.79	776	1	.00	54484	99.94
717	12	.02	54144	99.32	745	4	.01	54405	99.79	778	1	.00	54485	99.94
718	16	.03	54160	99.35	746	2	.00	54407	99.80	780	1	.00	54486	99.94
719	20	.04	54180	99.38	747	4	.01	54411	99.81	781	1	.00	54487	99.94
720	10	.02	54190	99.40	748	3	.01	54414	99.81	783	3	.01	54490	99.95
721	16	.03	54206	99.43	749	4	.01	54418	99.82	785	1	.00	54491	99.95
722	13	.02	54219	99.45	750	8	.01	54426	99.83	786	1	.00	54492	99.95
723	11	.02	54230	99.47	751	3	.01	54429	99.84	787	2	.00	54494	99.96
724	16	.03	54246	99.50	752	4	.01	54433	99.85	788	2	.00	54496	99.96
725	8	.01	54254	99.52	753	5	.01	54438	99.86	789	1	.00	54497	99.96
726	10	.02	54264	99.54	754	1	.00	54439	99.86	796	2	.00	54499	99.97
727	10	.02	54274	99.55	755	2	.00	54441	99.86	798	1	.00	54500	99.97
728	18	.03	54292	99.59	756	4	.01	54445	99.87	802	1	.00	54501	99.97
729	6	.01	54298	99.60	757	3	.01	54448	99.87	804	1	.00	54502	99.97
730	6	.01	54304	99.61	758	3	.01	54451	99.88	815	1	.00	54503	99.97
731	6	.01	54310	99.62	759	4	.01	54455	99.89	816	1	.00	54504	99.98
732	12	.02	54322	99.64	760	2	.00	54457	99.89	820	1	.00	54505	99.98
733	8	.01	54330	99.66	761	3	.01	54460	99.90	829	1	.00	54506	99.98
734	15	.03	54345	99.68	762	2	.00	54462	99.90	833	1	.00	54507	99.98
735	4	.01	54349	99.69	763	3	.01	54465	99.90	840	2	.00	54509	99.99
736	12	.02	54361	99.71	764	5	.01	54470	99.91	865	3	.01	54512	99.99
737	3	.01	54364	99.72	766	1	.00	54471	99.92	869	1	.00	54513	99.99
738	5	.01	54369	99.73	768	2	.00	54473	99.92	879	2	.00	54515	100.00
739	4	.01	54373	99.74	769	2	.00	54475	99.92	940	2	.00	54517	100.00
740	9	.02	54382	99.75	771	1	.00	54476	99.92					

Figure 5. Reading 4 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 6. Spanish Reading 4 Scale Score Distribution

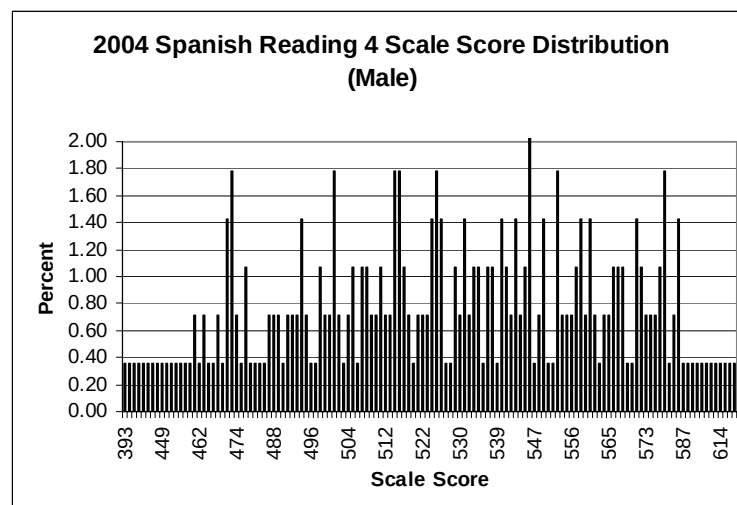
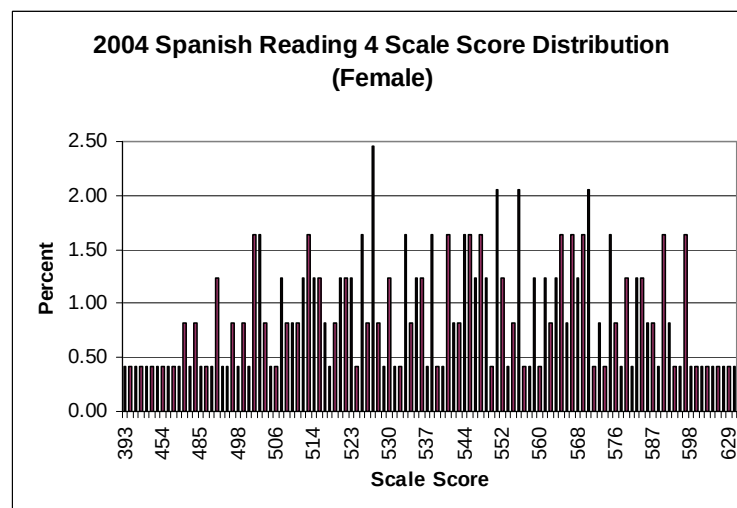
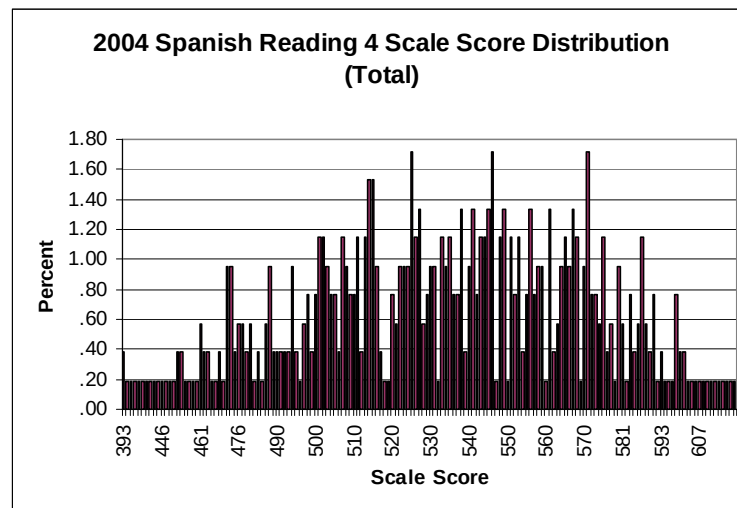
(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
393	2	.38	2	0.38	494	5	.95	85	16.22	538	7	1.34	280	53.44
411	1	.19	3	0.57	495	2	.38	87	16.60	539	2	.38	282	53.82
416	1	.19	4	0.76	496	1	.19	88	16.79	540	5	.95	287	54.77
419	1	.19	5	0.95	497	3	.57	91	17.37	541	7	1.34	294	56.11
431	1	.19	6	1.15	498	4	.76	95	18.13	542	4	.76	298	56.87
435	1	.19	7	1.34	499	2	.38	97	18.51	543	6	1.15	304	58.02
438	1	.19	8	1.53	500	4	.76	101	19.27	544	6	1.15	310	59.16
440	1	.19	9	1.72	501	6	1.15	107	20.42	545	7	1.34	317	60.50
442	1	.19	10	1.91	502	6	1.15	113	21.56	546	9	1.72	326	62.21
443	1	.19	11	2.10	503	5	.95	118	22.52	547	1	.19	327	62.40
446	1	.19	12	2.29	504	4	.76	122	23.28	548	6	1.15	333	63.55
447	1	.19	13	2.48	505	4	.76	126	24.05	549	7	1.34	340	64.89
449	1	.19	14	2.67	506	2	.38	128	24.43	550	1	.19	341	65.08
451	1	.19	15	2.86	507	6	1.15	134	25.57	551	6	1.15	347	66.22
453	2	.38	17	3.24	508	5	.95	139	26.53	552	4	.76	351	66.98
454	2	.38	19	3.63	509	4	.76	143	27.29	553	6	1.15	357	68.13
455	1	.19	20	3.82	510	4	.76	147	28.05	554	2	.38	359	68.51
458	1	.19	21	4.01	511	6	1.15	153	29.20	555	4	.76	363	69.27
459	1	.19	22	4.20	512	2	.38	155	29.58	556	7	1.34	370	70.61
460	1	.19	23	4.39	513	6	1.15	161	30.73	557	4	.76	374	71.37
461	3	.57	26	4.96	514	8	1.53	169	32.25	558	5	.95	379	72.33
462	2	.38	28	5.34	515	8	1.53	177	33.78	559	5	.95	384	73.28
464	2	.38	30	5.73	516	5	.95	182	34.73	560	1	.19	385	73.47
466	1	.19	31	5.92	517	2	.38	184	35.11	561	7	1.34	392	74.81
467	1	.19	32	6.11	518	1	.19	185	35.31	562	2	.38	394	75.19
469	2	.38	34	6.49	519	1	.19	186	35.50	563	3	.57	397	75.76
471	1	.19	35	6.68	520	4	.76	190	36.26	564	5	.95	402	76.72
472	5	.95	40	7.63	521	3	.57	193	36.83	565	6	1.15	408	77.86
473	5	.95	45	8.59	522	5	.95	198	37.79	566	5	.95	413	78.82
474	2	.38	47	8.97	523	5	.95	203	38.74	567	7	1.34	420	80.15
476	3	.57	50	9.54	524	5	.95	208	39.69	568	6	1.15	426	81.30
478	3	.57	53	10.11	525	9	1.72	217	41.41	569	1	.19	427	81.49
479	2	.38	55	10.50	526	6	1.15	223	42.56	570	5	.95	432	82.44
481	3	.57	58	11.07	527	7	1.34	230	43.89	571	9	1.72	441	84.16
484	1	.19	59	11.26	528	3	.57	233	44.47	572	4	.76	445	84.92
485	2	.38	61	11.64	529	4	.76	237	45.23	573	4	.76	449	85.69
486	1	.19	62	11.83	530	5	.95	242	46.18	574	3	.57	452	86.26
487	3	.57	65	12.40	531	5	.95	247	47.14	575	6	1.15	458	87.40
488	5	.95	70	13.36	532	1	.19	248	47.33	576	2	.38	460	87.79
489	2	.38	72	13.74	533	6	1.15	254	48.47	577	3	.57	463	88.36
490	2	.38	74	14.12	534	5	.95	259	49.43	579	1	.19	464	88.55
491	2	.38	76	14.50	535	6	1.15	265	50.57	580	5	.95	469	89.50
492	2	.38	78	14.89	536	4	.76	269	51.34	581	3	.57	472	90.08
493	2	.38	80	15.27	537	4	.76	273	52.10	582	1	.19	473	90.27

Appendix 6. Spanish Reading 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
583	4	.76	477	91.03	595	1	.19	502	95.80	609	1	.19	516	98.47
584	2	.38	479	91.41	596	1	.19	503	95.99	611	1	.19	517	98.66
585	3	.57	482	91.98	597	4	.76	507	96.76	612	1	.19	518	98.85
586	6	1.15	488	93.13	598	2	.38	509	97.14	614	1	.19	519	99.05
587	3	.57	491	93.70	599	2	.38	511	97.52	616	1	.19	520	99.24
589	2	.38	493	94.08	600	1	.19	512	97.71	625	1	.19	521	99.43
590	4	.76	497	94.85	605	1	.19	513	97.90	629	1	.19	522	99.62
592	1	.19	498	95.04	606	1	.19	514	98.09	635	1	.19	523	99.81
593	2	.38	500	95.42	607	1	.19	515	98.28	652	1	.19	524	100.00
594	1	.19	501	95.61										

Figure 6. Spanish Reading 4 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 7. Writing 4 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
190	5	.01	5	0.01	309	2	.00	72	0.13	354	14	.03	375	0.69
208	1	.00	6	0.01	310	2	.00	74	0.14	355	11	.02	386	0.71
210	1	.00	7	0.01	311	3	.01	77	0.14	356	32	.06	418	0.77
211	1	.00	8	0.01	312	1	.00	78	0.14	357	23	.04	441	0.81
213	1	.00	9	0.02	313	1	.00	79	0.14	358	22	.04	463	0.85
218	1	.00	10	0.02	314	6	.01	85	0.16	359	20	.04	483	0.89
219	1	.00	11	0.02	315	2	.00	87	0.16	360	25	.05	508	0.93
229	1	.00	12	0.02	316	2	.00	89	0.16	361	12	.02	520	0.95
235	1	.00	13	0.02	317	5	.01	94	0.17	362	27	.05	547	1.00
237	1	.00	14	0.03	319	5	.01	99	0.18	363	35	.06	582	1.07
244	1	.00	15	0.03	320	3	.01	102	0.19	364	30	.05	612	1.12
248	1	.00	16	0.03	321	1	.00	103	0.19	365	34	.06	646	1.18
249	1	.00	17	0.03	322	2	.00	105	0.19	366	25	.05	671	1.23
251	1	.00	18	0.03	323	2	.00	107	0.20	367	31	.06	702	1.29
259	1	.00	19	0.03	324	6	.01	113	0.21	368	25	.05	727	1.33
260	1	.00	20	0.04	325	5	.01	118	0.22	369	26	.05	753	1.38
262	1	.00	21	0.04	326	2	.00	120	0.22	370	29	.05	782	1.43
266	1	.00	22	0.04	327	6	.01	126	0.23	371	24	.04	806	1.48
271	1	.00	23	0.04	328	1	.00	127	0.23	372	42	.08	848	1.55
272	1	.00	24	0.04	329	5	.01	132	0.24	373	28	.05	876	1.61
275	1	.00	25	0.05	330	1	.00	133	0.24	374	30	.05	906	1.66
278	1	.00	26	0.05	331	4	.01	137	0.25	375	35	.06	941	1.73
279	1	.00	27	0.05	332	9	.02	146	0.27	376	42	.08	983	1.80
280	2	.00	29	0.05	333	5	.01	151	0.28	377	42	.08	1025	1.88
282	1	.00	30	0.05	334	9	.02	160	0.29	378	33	.06	1058	1.94
284	1	.00	31	0.06	335	11	.02	171	0.31	379	40	.07	1098	2.01
286	1	.00	32	0.06	336	5	.01	176	0.32	380	46	.08	1144	2.10
287	1	.00	33	0.06	337	12	.02	188	0.34	381	55	.10	1199	2.20
290	2	.00	35	0.06	338	7	.01	195	0.36	382	48	.09	1247	2.29
292	1	.00	36	0.07	339	8	.01	203	0.37	383	53	.10	1300	2.38
293	1	.00	37	0.07	340	9	.02	212	0.39	384	53	.10	1353	2.48
294	1	.00	38	0.07	341	4	.01	216	0.40	385	67	.12	1420	2.60
296	3	.01	41	0.08	342	9	.02	225	0.41	386	53	.10	1473	2.70
297	1	.00	42	0.08	343	5	.01	230	0.42	387	59	.11	1532	2.81
298	3	.01	45	0.08	344	14	.03	244	0.45	388	53	.10	1585	2.91
299	1	.00	46	0.08	345	6	.01	250	0.46	389	81	.15	1666	3.05
301	1	.00	47	0.09	346	12	.02	262	0.48	390	73	.13	1739	3.19
302	2	.00	49	0.09	347	14	.03	276	0.51	391	60	.11	1799	3.30
303	3	.01	52	0.10	348	13	.02	289	0.53	392	74	.14	1873	3.43
304	2	.00	54	0.10	349	18	.03	307	0.56	393	71	.13	1944	3.56
305	7	.01	61	0.11	350	10	.02	317	0.58	394	68	.12	2012	3.69
306	2	.00	63	0.12	351	18	.03	335	0.61	395	88	.16	2100	3.85
307	4	.01	67	0.12	352	13	.02	348	0.64	396	91	.17	2191	4.02
308	3	.01	70	0.13	353	13	.02	361	0.66	397	66	.12	2257	4.14

Appendix 7. Writing 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
398	85	.16	2342	4.29	443	271	.50	10144	18.60	488	414	.76	27195	49.86
399	86	.16	2428	4.45	444	240	.44	10384	19.04	489	459	.84	27654	50.70
400	91	.17	2519	4.62	445	304	.56	10688	19.59	490	467	.86	28121	51.55
401	93	.17	2612	4.79	446	276	.51	10964	20.10	491	418	.77	28539	52.32
402	105	.19	2717	4.98	447	273	.50	11237	20.60	492	437	.80	28976	53.12
403	103	.19	2820	5.17	448	292	.54	11529	21.14	493	436	.80	29412	53.92
404	98	.18	2918	5.35	449	321	.59	11850	21.72	494	439	.80	29851	54.73
405	108	.20	3026	5.55	450	303	.56	12153	22.28	495	396	.73	30247	55.45
406	101	.19	3127	5.73	451	285	.52	12438	22.80	496	405	.74	30652	56.19
407	102	.19	3229	5.92	452	336	.62	12774	23.42	497	449	.82	31101	57.02
408	111	.20	3340	6.12	453	342	.63	13116	24.05	498	417	.76	31518	57.78
409	132	.24	3472	6.37	454	356	.65	13472	24.70	499	422	.77	31940	58.56
410	118	.22	3590	6.58	455	333	.61	13805	25.31	500	432	.79	32372	59.35
411	130	.24	3720	6.82	456	368	.67	14173	25.98	501	412	.76	32784	60.10
412	128	.23	3848	7.05	457	360	.66	14533	26.64	502	416	.76	33200	60.87
413	135	.25	3983	7.30	458	346	.63	14879	27.28	503	400	.73	33600	61.60
414	152	.28	4135	7.58	459	376	.69	15255	27.97	504	447	.82	34047	62.42
415	147	.27	4282	7.85	460	381	.70	15636	28.67	505	424	.78	34471	63.20
416	170	.31	4452	8.16	461	375	.69	16011	29.35	506	402	.74	34873	63.93
417	168	.31	4620	8.47	462	374	.69	16385	30.04	507	419	.77	35292	64.70
418	178	.33	4798	8.80	463	362	.66	16747	30.70	508	424	.78	35716	65.48
419	154	.28	4952	9.08	464	359	.66	17106	31.36	509	400	.73	36116	66.21
420	160	.29	5112	9.37	465	355	.65	17461	32.01	510	394	.72	36510	66.93
421	185	.34	5297	9.71	466	419	.77	17880	32.78	511	374	.69	36884	67.62
422	170	.31	5467	10.02	467	416	.76	18296	33.54	512	378	.69	37262	68.31
423	167	.31	5634	10.33	468	393	.72	18689	34.26	513	386	.71	37648	69.02
424	146	.27	5780	10.60	469	384	.70	19073	34.97	514	366	.67	38014	69.69
425	198	.36	5978	10.96	470	394	.72	19467	35.69	515	389	.71	38403	70.40
426	174	.32	6152	11.28	471	419	.77	19886	36.46	516	397	.73	38800	71.13
427	197	.36	6349	11.64	472	424	.78	20310	37.23	517	366	.67	39166	71.80
428	207	.38	6556	12.02	473	425	.78	20735	38.01	518	389	.71	39555	72.52
429	183	.34	6739	12.35	474	439	.80	21174	38.82	519	338	.62	39893	73.14
430	217	.40	6956	12.75	475	418	.77	21592	39.58	520	354	.65	40247	73.79
431	238	.44	7194	13.19	476	398	.73	21990	40.31	521	323	.59	40570	74.38
432	224	.41	7418	13.60	477	446	.82	22436	41.13	522	366	.67	40936	75.05
433	231	.42	7649	14.02	478	400	.73	22836	41.87	523	351	.64	41287	75.69
434	220	.40	7869	14.43	479	429	.79	23265	42.65	524	366	.67	41653	76.36
435	229	.42	8098	14.85	480	426	.78	23691	43.43	525	316	.58	41969	76.94
436	237	.43	8335	15.28	481	414	.76	24105	44.19	526	350	.64	42319	77.58
437	266	.49	8601	15.77	482	479	.88	24584	45.07	527	304	.56	42623	78.14
438	234	.43	8835	16.20	483	443	.81	25027	45.88	528	313	.57	42936	78.72
439	277	.51	9112	16.71	484	439	.80	25466	46.69	529	302	.55	43238	79.27
440	263	.48	9375	17.19	485	430	.79	25896	47.48	530	291	.53	43529	79.80
441	255	.47	9630	17.65	486	430	.79	26326	48.26	531	259	.47	43788	80.28
442	243	.45	9873	18.10	487	455	.83	26781	49.10	532	316	.58	44104	80.86

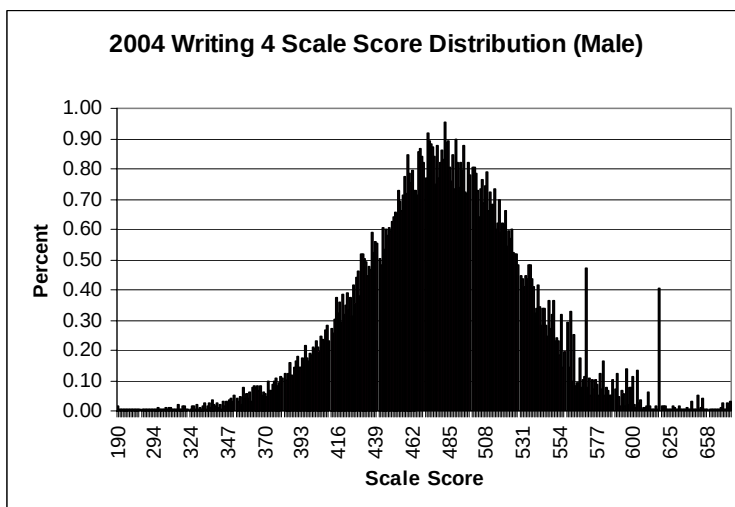
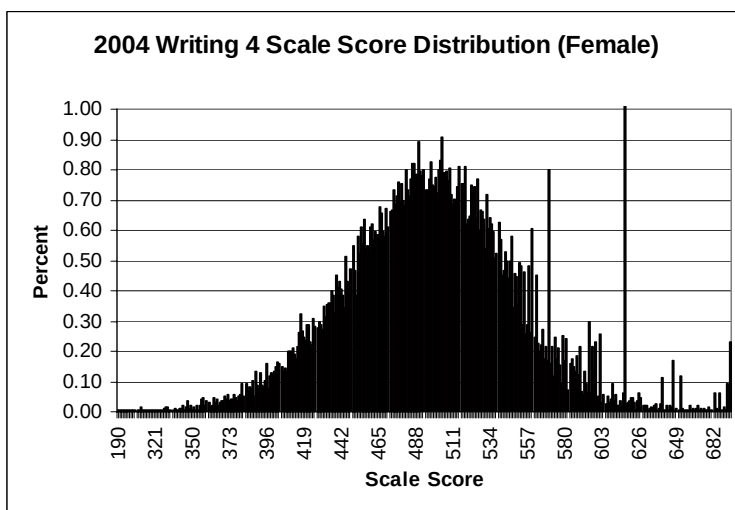
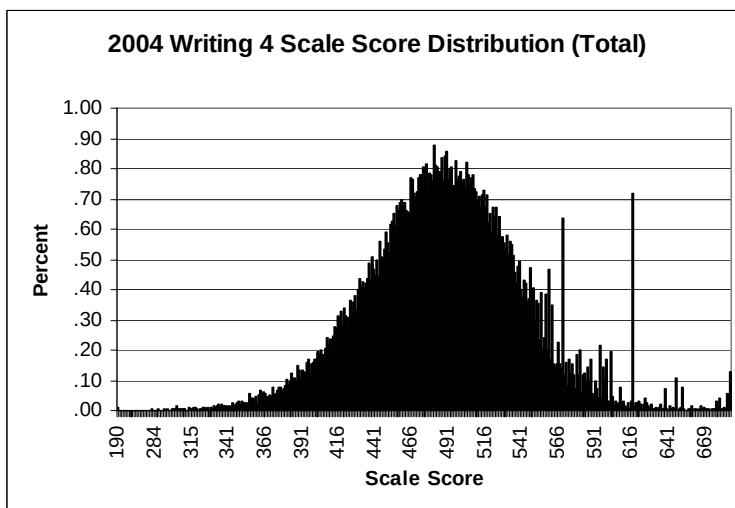
Appendix 7. Writing 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
533	282	.52	44386	81.37	578	40	.07	51901	95.15	623	10	.02	54018	99.03
534	306	.56	44692	81.93	579	102	.19	52003	95.34	624	3	.01	54021	99.04
535	300	.55	44992	82.48	580	65	.12	52068	95.46	625	10	.02	54031	99.06
536	280	.51	45272	83.00	581	110	.20	52178	95.66	626	21	.04	54052	99.09
537	250	.46	45522	83.46	582	34	.06	52212	95.72	627	15	.03	54067	99.12
538	229	.42	45751	83.88	583	65	.12	52277	95.84	628	7	.01	54074	99.13
539	261	.48	46012	84.35	584	66	.12	52343	95.96	629	6	.01	54080	99.15
540	268	.49	46280	84.85	585	55	.10	52398	96.06	630	10	.02	54090	99.16
541	217	.40	46497	85.24	586	50	.09	52448	96.15	631	2	.00	54092	99.17
542	203	.37	46700	85.62	587	77	.14	52525	96.29	632	4	.01	54096	99.18
543	235	.43	46935	86.05	588	53	.10	52578	96.39	633	6	.01	54102	99.19
544	228	.42	47163	86.46	589	93	.17	52671	96.56	634	4	.01	54106	99.19
545	196	.36	47359	86.82	590	31	.06	52702	96.62	635	6	.01	54112	99.20
546	201	.37	47560	87.19	591	19	.03	52721	96.65	636	10	.02	54122	99.22
547	257	.47	47817	87.66	592	53	.10	52774	96.75	637	2	.00	54124	99.23
548	168	.31	47985	87.97	593	40	.07	52814	96.82	638	4	.01	54128	99.23
549	211	.39	48196	88.36	594	21	.04	52835	96.86	639	9	.02	54137	99.25
550	220	.40	48416	88.76	595	118	.22	52953	97.08	640	39	.07	54176	99.32
551	159	.29	48575	89.05	596	22	.04	52975	97.12	641	2	.00	54178	99.33
552	199	.36	48774	89.42	597	79	.14	53054	97.26	642	1	.00	54179	99.33
553	194	.36	48968	89.77	598	57	.10	53111	97.37	643	7	.01	54186	99.34
554	127	.23	49095	90.01	599	93	.17	53204	97.54	644	3	.01	54189	99.35
555	213	.39	49308	90.40	600	18	.03	53222	97.57	645	5	.01	54194	99.35
556	109	.20	49417	90.60	601	16	.03	53238	97.60	646	4	.01	54198	99.36
557	131	.24	49548	90.84	602	106	.19	53344	97.80	647	60	.11	54258	99.47
558	211	.39	49759	91.22	603	15	.03	53359	97.82	648	1	.00	54259	99.47
559	110	.20	49869	91.43	604	25	.05	53384	97.87	649	4	.01	54263	99.48
560	254	.47	50123	91.89	605	8	.01	53392	97.88	650	5	.01	54268	99.49
561	93	.17	50216	92.06	606	16	.03	53408	97.91	651	42	.08	54310	99.57
562	191	.35	50407	92.41	607	11	.02	53419	97.93	652	3	.01	54313	99.57
563	83	.15	50490	92.56	608	15	.03	53434	97.96	653	1	.00	54314	99.57
564	79	.14	50569	92.71	609	41	.08	53475	98.04	654	1	.00	54315	99.58
565	85	.16	50654	92.86	610	14	.03	53489	98.06	655	3	.01	54318	99.58
566	122	.22	50776	93.09	611	17	.03	53506	98.09	656	2	.00	54320	99.59
567	69	.13	50845	93.21	612	7	.01	53513	98.11	657	2	.00	54322	99.59
568	85	.16	50930	93.37	613	6	.01	53519	98.12	658	8	.01	54330	99.60
569	76	.14	51006	93.51	614	14	.03	53533	98.14	659	1	.00	54331	99.61
570	346	.63	51352	94.14	615	4	.01	53537	98.15	660	4	.01	54335	99.61
571	65	.12	51417	94.26	616	17	.03	53554	98.18	662	4	.01	54339	99.62
572	88	.16	51505	94.42	617	392	.72	53946	98.90	664	1	.00	54340	99.62
573	46	.08	51551	94.51	618	7	.01	53953	98.91	666	3	.01	54343	99.63
574	93	.17	51644	94.68	619	13	.02	53966	98.94	667	7	.01	54350	99.64
575	67	.12	51711	94.80	620	13	.02	53979	98.96	668	2	.00	54352	99.64
576	85	.16	51796	94.96	621	16	.03	53995	98.99	669	5	.01	54357	99.65
577	65	.12	51861	95.08	622	13	.02	54008	99.01	670	2	.00	54359	99.66

Appendix 7. Writing 4 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
671	3	.01	54362	99.66	682	18	.03	54391	99.72	700	5	.01	54430	99.79
672	2	.00	54364	99.67	686	6	.01	54397	99.73	702	2	.00	54432	99.79
673	1	.00	54365	99.67	687	1	.00	54398	99.73	703	31	.06	54463	99.85
675	4	.01	54369	99.68	689	23	.04	54421	99.77	716	12	.02	54475	99.87
679	2	.00	54371	99.68	691	2	.00	54423	99.77	730	71	.13	54546	100.00
681	2	.00	54373	99.68	694	2	.00	54425	99.78					

Figure 7. Writing 4 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 8. Spanish Writing 4 Scale Score Distribution

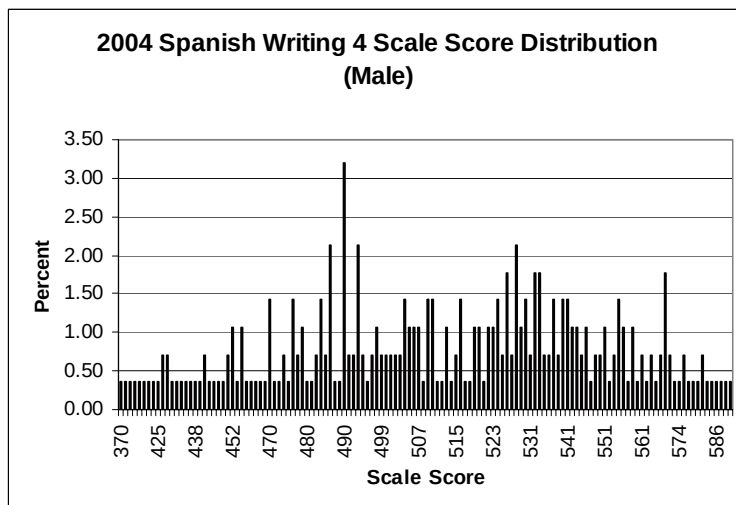
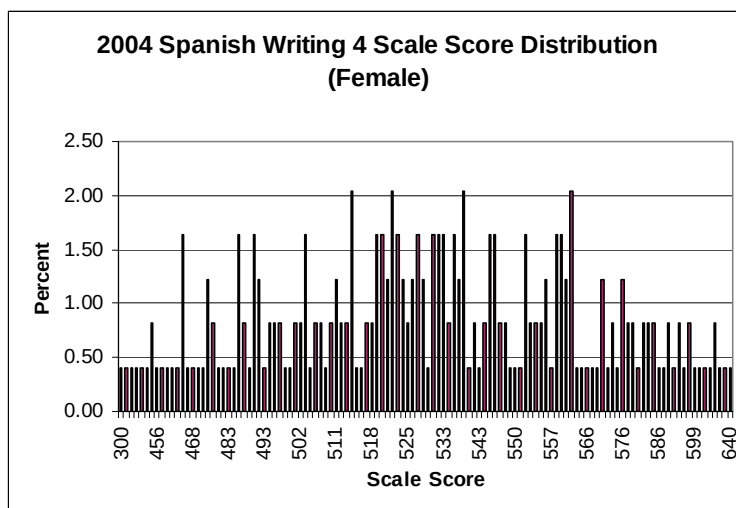
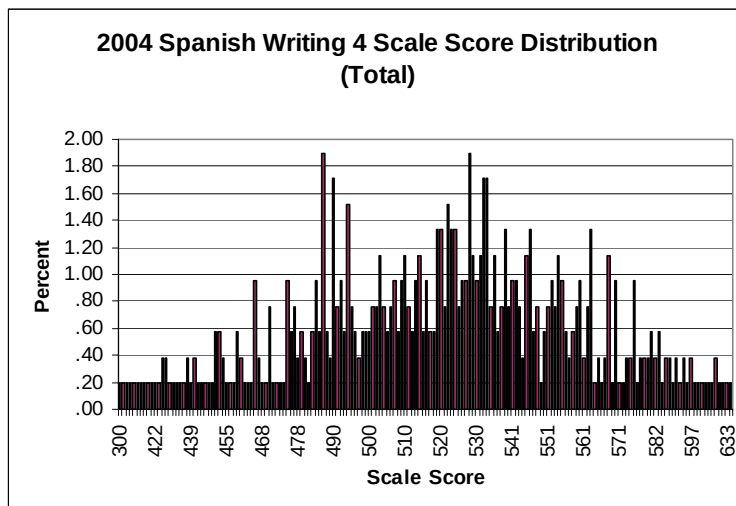
(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
300	1	.19	1	0.19	472	1	.19	65	12.33	518	3	.57	236	44.78
370	1	.19	2	0.38	473	1	.19	66	12.52	519	7	1.33	243	46.11
375	1	.19	3	0.57	474	1	.19	67	12.71	520	7	1.33	250	47.44
377	1	.19	4	0.76	475	5	.95	72	13.66	521	4	.76	254	48.20
379	1	.19	5	0.95	476	3	.57	75	14.23	522	8	1.52	262	49.72
389	1	.19	6	1.14	477	4	.76	79	14.99	523	7	1.33	269	51.04
391	1	.19	7	1.33	478	2	.38	81	15.37	524	7	1.33	276	52.37
402	1	.19	8	1.52	479	3	.57	84	15.94	525	4	.76	280	53.13
415	1	.19	9	1.71	480	2	.38	86	16.32	526	5	.95	285	54.08
416	1	.19	10	1.90	481	1	.19	87	16.51	527	5	.95	290	55.03
422	1	.19	11	2.09	482	3	.57	90	17.08	528	10	1.90	300	56.93
425	1	.19	12	2.28	483	5	.95	95	18.03	529	6	1.14	306	58.06
426	2	.38	14	2.66	484	3	.57	98	18.60	530	5	.95	311	59.01
427	2	.38	16	3.04	486	10	1.90	108	20.49	531	6	1.14	317	60.15
428	1	.19	17	3.23	487	3	.57	111	21.06	532	9	1.71	326	61.86
429	1	.19	18	3.42	488	2	.38	113	21.44	533	9	1.71	335	63.57
430	1	.19	19	3.61	490	9	1.71	122	23.15	534	4	.76	339	64.33
434	1	.19	20	3.80	491	4	.76	126	23.91	535	6	1.14	345	65.46
437	1	.19	21	3.98	492	5	.95	131	24.86	536	3	.57	348	66.03
438	2	.38	23	4.36	493	3	.57	134	25.43	537	4	.76	352	66.79
439	1	.19	24	4.55	494	8	1.52	142	26.94	539	7	1.33	359	68.12
441	2	.38	26	4.93	495	4	.76	146	27.70	540	4	.76	363	68.88
444	1	.19	27	5.12	496	3	.57	149	28.27	541	5	.95	368	69.83
446	1	.19	28	5.31	497	2	.38	151	28.65	542	5	.95	373	70.78
447	1	.19	29	5.50	498	3	.57	154	29.22	543	4	.76	377	71.54
448	1	.19	30	5.69	499	3	.57	157	29.79	544	2	.38	379	71.92
450	1	.19	31	5.88	500	3	.57	160	30.36	545	6	1.14	385	73.06
451	3	.57	34	6.45	501	4	.76	164	31.12	546	7	1.33	392	74.38
452	3	.57	37	7.02	502	4	.76	168	31.88	547	3	.57	395	74.95
454	2	.38	39	7.40	503	6	1.14	174	33.02	548	4	.76	399	75.71
455	1	.19	40	7.59	504	4	.76	178	33.78	549	1	.19	400	75.90
456	1	.19	41	7.78	505	3	.57	181	34.35	550	3	.57	403	76.47
457	1	.19	42	7.97	506	4	.76	185	35.10	551	4	.76	407	77.23
458	3	.57	45	8.54	507	5	.95	190	36.05	552	5	.95	412	78.18
460	2	.38	47	8.92	508	3	.57	193	36.62	553	4	.76	416	78.94
462	1	.19	48	9.11	509	5	.95	198	37.57	554	6	1.14	422	80.08
463	1	.19	49	9.30	510	6	1.14	204	38.71	555	5	.95	427	81.02
464	1	.19	50	9.49	511	4	.76	208	39.47	556	3	.57	430	81.59
466	5	.95	55	10.44	512	3	.57	211	40.04	557	2	.38	432	81.97
467	2	.38	57	10.82	513	5	.95	216	40.99	558	3	.57	435	82.54
468	1	.19	58	11.01	514	6	1.14	222	42.13	559	4	.76	439	83.30
469	1	.19	59	11.20	515	3	.57	225	42.69	560	5	.95	444	84.25
470	4	.76	63	11.95	516	5	.95	230	43.64	561	2	.38	446	84.63
471	1	.19	64	12.14	517	3	.57	233	44.21	562	4	.76	450	85.39

Appendix 8. Spanish Writing 4 Scale Score Distribution

SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%	SS	Freq.	%	Cum. Freq.	Cum.%
563	7	1.33	457	86.72	578	2	.38	489	92.79	595	1	.19	513	97.34
564	1	.19	458	86.91	579	2	.38	491	93.17	597	2	.38	515	97.72
565	2	.38	460	87.29	580	2	.38	493	93.55	598	1	.19	516	97.91
566	1	.19	461	87.48	581	3	.57	496	94.12	599	1	.19	517	98.10
567	2	.38	463	87.86	582	2	.38	498	94.50	600	1	.19	518	98.29
568	6	1.14	469	88.99	583	3	.57	501	95.07	602	1	.19	519	98.48
569	1	.19	470	89.18	584	1	.19	502	95.26	605	1	.19	520	98.67
570	5	.95	475	90.13	585	2	.38	504	95.64	609	1	.19	521	98.86
571	1	.19	476	90.32	586	2	.38	506	96.02	615	2	.38	523	99.24
572	1	.19	477	90.51	587	1	.19	507	96.20	616	1	.19	524	99.43
573	2	.38	479	90.89	588	2	.38	509	96.58	620	1	.19	525	99.62
574	2	.38	481	91.27	589	1	.19	510	96.77	633	1	.19	526	99.81
576	5	.95	486	92.22	594	2	.38	512	97.15	640	1	.19	527	100.00
577	1	.19	487	92.41										

Figure 8. Spanish Writing 4 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 9. Reading 5 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
220	262	.47	262	0.47	311	1	.00	341	0.61	360	3	.01	467	0.83
224	1	.00	263	0.47	312	3	.01	344	0.61	361	3	.01	470	0.84
227	1	.00	264	0.47	313	3	.01	347	0.62	362	2	.00	472	0.84
243	1	.00	265	0.47	314	1	.00	348	0.62	363	3	.01	475	0.85
244	1	.00	266	0.48	316	1	.00	349	0.62	364	6	.01	481	0.86
246	2	.00	268	0.48	317	3	.01	352	0.63	365	3	.01	484	0.86
253	1	.00	269	0.48	318	1	.00	353	0.63	366	2	.00	486	0.87
254	1	.00	270	0.48	319	3	.01	356	0.64	367	2	.00	488	0.87
255	1	.00	271	0.48	320	1	.00	357	0.64	368	2	.00	490	0.88
257	2	.00	273	0.49	321	4	.01	361	0.64	369	1	.00	491	0.88
258	1	.00	274	0.49	322	3	.01	364	0.65	370	9	.02	500	0.89
260	2	.00	276	0.49	323	2	.00	366	0.65	371	4	.01	504	0.90
262	1	.00	277	0.49	324	1	.00	367	0.66	372	5	.01	509	0.91
263	1	.00	278	0.50	325	1	.00	368	0.66	373	3	.01	512	0.91
264	2	.00	280	0.50	326	2	.00	370	0.66	374	5	.01	517	0.92
266	3	.01	283	0.51	328	1	.00	371	0.66	375	3	.01	520	0.93
267	2	.00	285	0.51	329	5	.01	376	0.67	376	4	.01	524	0.94
270	1	.00	286	0.51	330	4	.01	380	0.68	377	2	.00	526	0.94
271	1	.00	287	0.51	331	2	.00	382	0.68	378	2	.00	528	0.94
273	4	.01	291	0.52	332	5	.01	387	0.69	379	9	.02	537	0.96
275	3	.01	294	0.53	333	1	.00	388	0.69	380	8	.01	545	0.97
278	1	.00	295	0.53	335	2	.00	390	0.70	381	6	.01	551	0.98
282	1	.00	296	0.53	336	2	.00	392	0.70	382	3	.01	554	0.99
283	1	.00	297	0.53	337	4	.01	396	0.71	383	13	.02	567	1.01
284	1	.00	298	0.53	338	5	.01	401	0.72	385	5	.01	572	1.02
285	2	.00	300	0.54	339	3	.01	404	0.72	386	9	.02	581	1.04
286	3	.01	303	0.54	340	2	.00	406	0.73	387	6	.01	587	1.05
288	1	.00	304	0.54	341	2	.00	408	0.73	388	6	.01	593	1.06
290	1	.00	305	0.54	342	5	.01	413	0.74	389	7	.01	600	1.07
293	2	.00	307	0.55	343	2	.00	415	0.74	390	6	.01	606	1.08
294	2	.00	309	0.55	345	3	.01	418	0.75	391	7	.01	613	1.10
296	2	.00	311	0.56	347	3	.01	421	0.75	392	8	.01	621	1.11
297	3	.01	314	0.56	348	4	.01	425	0.76	393	5	.01	626	1.12
299	2	.00	316	0.56	349	5	.01	430	0.77	394	6	.01	632	1.13
300	1	.00	317	0.57	350	3	.01	433	0.77	395	6	.01	638	1.14
301	2	.00	319	0.57	351	3	.01	436	0.78	396	8	.01	646	1.15
302	2	.00	321	0.57	352	2	.00	438	0.78	397	7	.01	653	1.17
303	3	.01	324	0.58	353	3	.01	441	0.79	398	9	.02	662	1.18
304	2	.00	326	0.58	354	4	.01	445	0.79	399	7	.01	669	1.20
305	4	.01	330	0.59	355	5	.01	450	0.80	400	12	.02	681	1.22
306	2	.00	332	0.59	356	2	.00	452	0.81	401	9	.02	690	1.23
307	2	.00	334	0.60	357	1	.00	453	0.81	402	8	.01	698	1.25
308	2	.00	336	0.60	358	6	.01	459	0.82	403	10	.02	708	1.26
309	4	.01	340	0.61	359	5	.01	464	0.83	404	6	.01	714	1.28

Appendix 9. Reading 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
405	11	.02	725	1.30	450	18	.03	1341	2.40	495	53	.09	2880	5.15
406	8	.01	733	1.31	451	23	.04	1364	2.44	496	65	.12	2945	5.26
407	9	.02	742	1.33	452	18	.03	1382	2.47	497	61	.11	3006	5.37
408	7	.01	749	1.34	453	16	.03	1398	2.50	498	59	.11	3065	5.48
409	9	.02	758	1.35	454	18	.03	1416	2.53	499	58	.10	3123	5.58
410	8	.01	766	1.37	455	21	.04	1437	2.57	500	70	.13	3193	5.70
411	9	.02	775	1.38	456	25	.04	1462	2.61	501	66	.12	3259	5.82
412	3	.01	778	1.39	457	29	.05	1491	2.66	502	52	.09	3311	5.92
413	10	.02	788	1.41	458	23	.04	1514	2.70	503	58	.10	3369	6.02
414	12	.02	800	1.43	459	30	.05	1544	2.76	504	65	.12	3434	6.13
415	8	.01	808	1.44	460	25	.04	1569	2.80	505	48	.09	3482	6.22
416	9	.02	817	1.46	461	21	.04	1590	2.84	506	70	.13	3552	6.35
417	14	.03	831	1.48	462	25	.04	1615	2.89	507	68	.12	3620	6.47
418	13	.02	844	1.51	463	28	.05	1643	2.94	508	58	.10	3678	6.57
419	9	.02	853	1.52	464	30	.05	1673	2.99	509	67	.12	3745	6.69
420	11	.02	864	1.54	465	29	.05	1702	3.04	510	77	.14	3822	6.83
421	9	.02	873	1.56	466	18	.03	1720	3.07	511	82	.15	3904	6.97
422	15	.03	888	1.59	467	29	.05	1749	3.12	512	80	.14	3984	7.12
423	15	.03	903	1.61	468	34	.06	1783	3.19	513	76	.14	4060	7.25
424	14	.03	917	1.64	469	25	.04	1808	3.23	514	68	.12	4128	7.37
425	12	.02	929	1.66	470	38	.07	1846	3.30	515	72	.13	4200	7.50
426	11	.02	940	1.68	471	27	.05	1873	3.35	516	88	.16	4288	7.66
427	12	.02	952	1.70	472	28	.05	1901	3.40	517	78	.14	4366	7.80
428	21	.04	973	1.74	473	37	.07	1938	3.46	518	79	.14	4445	7.94
429	6	.01	979	1.75	474	31	.06	1969	3.52	519	91	.16	4536	8.10
430	15	.03	994	1.78	475	28	.05	1997	3.57	520	78	.14	4614	8.24
431	17	.03	1011	1.81	476	36	.06	2033	3.63	521	93	.17	4707	8.41
432	23	.04	1034	1.85	477	38	.07	2071	3.70	522	96	.17	4803	8.58
433	17	.03	1051	1.88	478	40	.07	2111	3.77	523	86	.15	4889	8.73
434	16	.03	1067	1.91	479	38	.07	2149	3.84	524	108	.19	4997	8.93
435	18	.03	1085	1.94	480	43	.08	2192	3.92	525	102	.18	5099	9.11
436	14	.03	1099	1.96	481	38	.07	2230	3.98	526	96	.17	5195	9.28
437	20	.04	1119	2.00	482	47	.08	2277	4.07	527	103	.18	5298	9.46
438	8	.01	1127	2.01	483	41	.07	2318	4.14	528	106	.19	5404	9.65
439	19	.03	1146	2.05	484	37	.07	2355	4.21	529	89	.16	5493	9.81
440	19	.03	1165	2.08	485	41	.07	2396	4.28	530	130	.23	5623	10.05
441	17	.03	1182	2.11	486	38	.07	2434	4.35	531	117	.21	5740	10.25
442	19	.03	1201	2.15	487	49	.09	2483	4.44	532	124	.22	5864	10.48
443	12	.02	1213	2.17	488	51	.09	2534	4.53	533	121	.22	5985	10.69
444	22	.04	1235	2.21	489	48	.09	2582	4.61	534	125	.22	6110	10.92
445	15	.03	1250	2.23	490	42	.08	2624	4.69	535	116	.21	6226	11.12
446	17	.03	1267	2.26	491	41	.07	2665	4.76	536	106	.19	6332	11.31
447	19	.03	1286	2.30	492	64	.11	2729	4.88	537	126	.23	6458	11.54
448	18	.03	1304	2.33	493	49	.09	2778	4.96	538	132	.24	6590	11.77
449	19	.03	1323	2.36	494	49	.09	2827	5.05	539	126	.23	6716	12.00

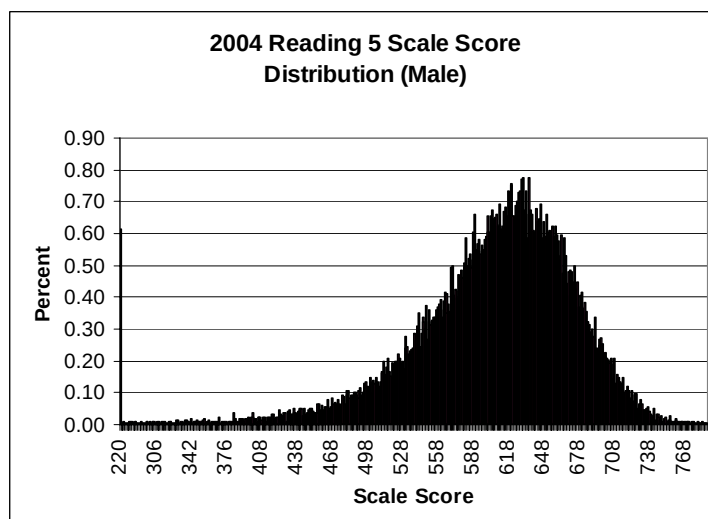
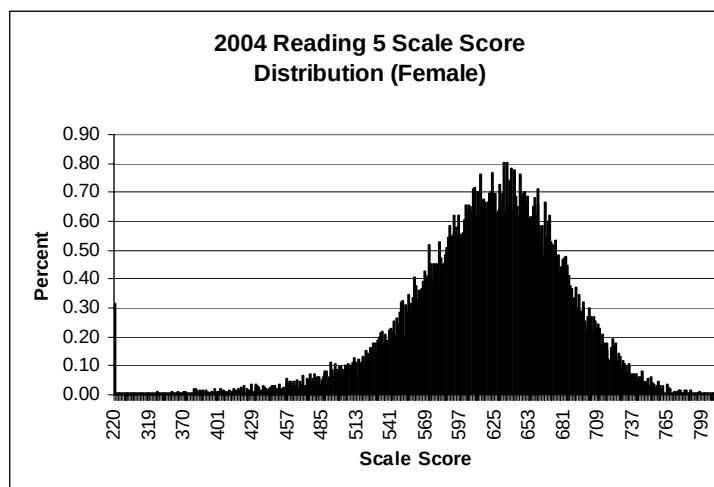
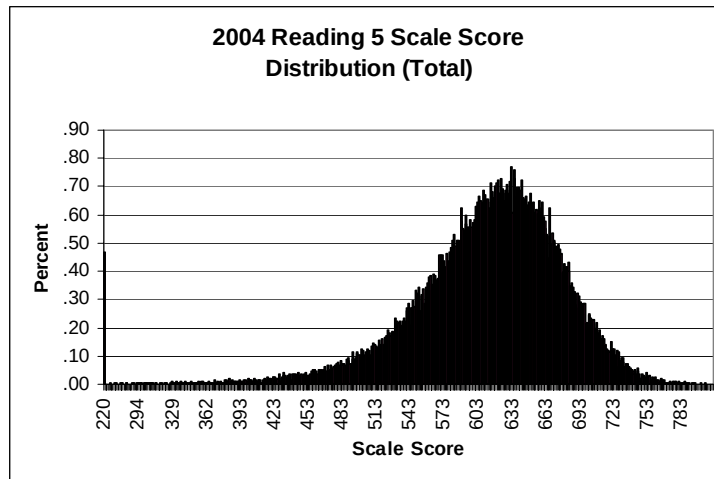
Appendix 9. Reading 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
540	145	.26	6861	12.26	585	286	.51	16298	29.12	630	380	.68	32269	57.65
541	152	.27	7013	12.53	586	284	.51	16582	29.62	631	403	.72	32672	58.37
542	161	.29	7174	12.82	587	280	.50	16862	30.12	632	383	.68	33055	59.05
543	116	.21	7290	13.02	588	323	.58	17185	30.70	633	430	.77	33485	59.82
544	152	.27	7442	13.29	589	349	.62	17534	31.32	634	340	.61	33825	60.43
545	152	.27	7594	13.57	590	308	.55	17842	31.87	635	408	.73	34233	61.16
546	165	.29	7759	13.86	591	306	.55	18148	32.42	636	425	.76	34658	61.92
547	153	.27	7912	14.13	592	316	.56	18464	32.99	637	370	.66	35028	62.58
548	186	.33	8098	14.47	593	336	.60	18800	33.59	638	391	.70	35419	63.28
549	149	.27	8247	14.73	594	311	.56	19111	34.14	639	389	.69	35808	63.97
550	180	.32	8427	15.05	595	311	.56	19422	34.70	640	348	.62	36156	64.59
551	192	.34	8619	15.40	596	326	.58	19748	35.28	641	385	.69	36541	65.28
552	145	.26	8764	15.66	597	306	.55	20054	35.83	642	405	.72	36946	66.00
553	179	.32	8943	15.98	598	311	.56	20365	36.38	643	370	.66	37316	66.66
554	174	.31	9117	16.29	599	321	.57	20686	36.96	644	362	.65	37678	67.31
555	189	.34	9306	16.62	600	327	.58	21013	37.54	645	367	.66	38045	67.97
556	160	.29	9466	16.91	601	353	.63	21366	38.17	646	373	.67	38418	68.63
557	182	.33	9648	17.24	602	353	.63	21719	38.80	647	355	.63	38773	69.27
558	192	.34	9840	17.58	603	361	.64	22080	39.45	648	327	.58	39100	69.85
559	200	.36	10040	17.94	604	372	.66	22452	40.11	649	360	.64	39460	70.49
560	214	.38	10254	18.32	605	359	.64	22811	40.75	650	380	.68	39840	71.17
561	216	.39	10470	18.70	606	363	.65	23174	41.40	651	348	.62	40188	71.80
562	186	.33	10656	19.04	607	360	.64	23534	42.04	652	362	.65	40550	72.44
563	199	.36	10855	19.39	608	384	.69	23918	42.73	653	340	.61	40890	73.05
564	218	.39	11073	19.78	609	376	.67	24294	43.40	654	330	.59	41220	73.64
565	216	.39	11289	20.17	610	349	.62	24643	44.02	655	347	.62	41567	74.26
566	201	.36	11490	20.53	611	366	.65	25009	44.68	656	338	.60	41905	74.86
567	208	.37	11698	20.90	612	368	.66	25377	45.34	657	348	.62	42253	75.48
568	209	.37	11907	21.27	613	349	.62	25726	45.96	658	364	.65	42617	76.13
569	257	.46	12164	21.73	614	400	.71	26126	46.67	659	340	.61	42957	76.74
570	229	.41	12393	22.14	615	360	.64	26486	47.32	660	360	.64	43317	77.38
571	255	.46	12648	22.60	616	381	.68	26867	48.00	661	331	.59	43648	77.98
572	257	.46	12905	23.05	617	369	.66	27236	48.66	662	308	.55	43956	78.53
573	245	.44	13150	23.49	618	392	.70	27628	49.36	663	323	.58	44279	79.10
574	233	.42	13383	23.91	619	377	.67	28005	50.03	664	296	.53	44575	79.63
575	227	.41	13610	24.31	620	399	.71	28404	50.74	665	251	.45	44826	80.08
576	258	.46	13868	24.77	621	406	.73	28810	51.47	666	350	.63	45176	80.71
577	246	.44	14114	25.21	622	379	.68	29189	52.15	667	294	.53	45470	81.23
578	262	.47	14376	25.68	623	380	.68	29569	52.82	668	276	.49	45746	81.72
579	244	.44	14620	26.12	624	407	.73	29976	53.55	669	301	.54	46047	82.26
580	271	.48	14891	26.60	625	388	.69	30364	54.24	670	286	.51	46333	82.77
581	286	.51	15177	27.11	626	364	.65	30728	54.89	671	283	.51	46616	83.28
582	297	.53	15474	27.64	627	380	.68	31108	55.57	672	275	.49	46891	83.77
583	265	.47	15739	28.12	628	384	.69	31492	56.26	673	270	.48	47161	84.25
584	273	.49	16012	28.61	629	397	.71	31889	56.97	674	276	.49	47437	84.75

Appendix 9. Reading 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
675	268	.48	47705	85.22	721	84	.15	54577	97.50	767	9	.02	55873	99.82
676	253	.45	47958	85.68	722	70	.13	54647	97.63	768	8	.01	55881	99.83
677	260	.46	48218	86.14	723	71	.13	54718	97.75	769	2	.00	55883	99.83
678	221	.39	48439	86.54	724	69	.12	54787	97.88	770	1	.00	55884	99.84
679	238	.43	48677	86.96	725	58	.10	54845	97.98	771	3	.01	55887	99.84
680	230	.41	48907	87.37	726	67	.12	54912	98.10	772	4	.01	55891	99.85
681	234	.42	49141	87.79	727	64	.11	54976	98.21	773	5	.01	55896	99.86
682	233	.42	49374	88.21	728	35	.06	55011	98.28	774	3	.01	55899	99.86
683	241	.43	49615	88.64	729	46	.08	55057	98.36	775	5	.01	55904	99.87
684	224	.40	49839	89.04	730	51	.09	55108	98.45	776	4	.01	55908	99.88
685	195	.35	50034	89.38	731	51	.09	55159	98.54	777	5	.01	55913	99.89
686	201	.36	50235	89.74	732	45	.08	55204	98.62	778	5	.01	55918	99.90
687	193	.34	50428	90.09	733	35	.06	55239	98.68	779	1	.00	55919	99.90
688	183	.33	50611	90.42	734	42	.08	55281	98.76	780	2	.00	55921	99.90
689	176	.31	50787	90.73	735	40	.07	55321	98.83	781	5	.01	55926	99.91
690	156	.28	50943	91.01	736	31	.06	55352	98.89	782	4	.01	55930	99.92
691	181	.32	51124	91.33	737	36	.06	55388	98.95	783	1	.00	55931	99.92
692	176	.31	51300	91.65	738	31	.06	55419	99.00	784	2	.00	55933	99.92
693	151	.27	51451	91.92	739	29	.05	55448	99.06	785	2	.00	55935	99.93
694	162	.29	51613	92.21	740	26	.05	55474	99.10	786	6	.01	55941	99.94
695	156	.28	51769	92.48	741	19	.03	55493	99.14	788	2	.00	55943	99.94
696	146	.26	51915	92.75	742	29	.05	55522	99.19	789	2	.00	55945	99.94
697	160	.29	52075	93.03	743	20	.04	55542	99.22	790	1	.00	55946	99.95
698	160	.29	52235	93.32	744	25	.04	55567	99.27	791	2	.00	55948	99.95
699	122	.22	52357	93.53	745	31	.06	55598	99.32	792	1	.00	55949	99.95
700	122	.22	52479	93.75	746	20	.04	55618	99.36	793	1	.00	55950	99.95
701	138	.25	52617	94.00	747	11	.02	55629	99.38	794	2	.00	55952	99.96
702	141	.25	52758	94.25	748	19	.03	55648	99.41	797	4	.01	55956	99.96
703	132	.24	52890	94.49	749	16	.03	55664	99.44	798	2	.00	55958	99.97
704	129	.23	53019	94.72	750	18	.03	55682	99.47	799	1	.00	55959	99.97
705	119	.21	53138	94.93	751	14	.03	55696	99.50	800	1	.00	55960	99.97
706	127	.23	53265	95.16	752	23	.04	55719	99.54	802	1	.00	55961	99.97
707	111	.20	53376	95.36	753	8	.01	55727	99.56	803	1	.00	55962	99.97
708	123	.22	53499	95.57	754	15	.03	55742	99.58	805	2	.00	55964	99.98
709	103	.18	53602	95.76	755	18	.03	55760	99.61	806	1	.00	55965	99.98
710	94	.17	53696	95.93	756	10	.02	55770	99.63	808	1	.00	55966	99.98
711	107	.19	53803	96.12	757	10	.02	55780	99.65	812	1	.00	55967	99.98
712	90	.16	53893	96.28	758	16	.03	55796	99.68	814	2	.00	55969	99.99
713	96	.17	53989	96.45	759	7	.01	55803	99.69	816	1	.00	55970	99.99
714	73	.13	54062	96.58	760	14	.03	55817	99.72	821	1	.00	55971	99.99
715	90	.16	54152	96.74	761	9	.02	55826	99.73	824	1	.00	55972	99.99
716	78	.14	54230	96.88	762	10	.02	55836	99.75	825	1	.00	55973	99.99
717	70	.13	54300	97.01	763	4	.01	55840	99.76	827	1	.00	55974	100.00
718	63	.11	54363	97.12	764	5	.01	55845	99.77	828	1	.00	55975	100.00
719	67	.12	54430	97.24	765	13	.02	55858	99.79	885	1	.00	55976	100.00
720	63	.11	54493	97.35	766	6	.01	55864	99.80					

Figure 9. Reading 5 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 10. Writing 5 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
220	34	.06	34	0.06	309	2	.00	113	0.20	354	20	.04	431	0.77
223	1	.00	35	0.06	310	1	.00	114	0.20	355	14	.03	445	0.80
225	1	.00	36	0.06	311	1	.00	115	0.21	356	20	.04	465	0.83
227	1	.00	37	0.07	313	2	.00	117	0.21	357	8	.01	473	0.85
230	2	.00	39	0.07	314	3	.01	120	0.21	358	24	.04	497	0.89
233	1	.00	40	0.07	315	5	.01	125	0.22	359	18	.03	515	0.92
235	2	.00	42	0.08	316	6	.01	131	0.23	360	17	.03	532	0.95
237	1	.00	43	0.08	317	1	.00	132	0.24	361	19	.03	551	0.98
239	1	.00	44	0.08	318	6	.01	138	0.25	362	12	.02	563	1.01
240	1	.00	45	0.08	319	5	.01	143	0.26	363	20	.04	583	1.04
247	2	.00	47	0.08	320	2	.00	145	0.26	364	20	.04	603	1.08
250	2	.00	49	0.09	321	2	.00	147	0.26	365	13	.02	616	1.10
255	2	.00	51	0.09	322	1	.00	148	0.26	366	19	.03	635	1.14
261	1	.00	52	0.09	323	3	.01	151	0.27	367	23	.04	658	1.18
262	3	.01	55	0.10	324	8	.01	159	0.28	368	22	.04	680	1.22
264	1	.00	56	0.10	325	1	.00	160	0.29	369	24	.04	704	1.26
265	2	.00	58	0.10	326	8	.01	168	0.30	370	17	.03	721	1.29
267	1	.00	59	0.11	327	7	.01	175	0.31	371	23	.04	744	1.33
268	1	.00	60	0.11	328	4	.01	179	0.32	372	22	.04	766	1.37
275	1	.00	61	0.11	329	7	.01	186	0.33	373	26	.05	792	1.42
276	1	.00	62	0.11	330	6	.01	192	0.34	374	26	.05	818	1.46
277	1	.00	63	0.11	331	6	.01	198	0.35	375	21	.04	839	1.50
280	2	.00	65	0.12	332	6	.01	204	0.36	376	27	.05	866	1.55
282	2	.00	67	0.12	333	9	.02	213	0.38	377	35	.06	901	1.61
283	1	.00	68	0.12	334	3	.01	216	0.39	378	29	.05	930	1.66
284	1	.00	69	0.12	335	8	.01	224	0.40	379	36	.06	966	1.73
286	1	.00	70	0.13	336	5	.01	229	0.41	380	38	.07	1004	1.79
287	3	.01	73	0.13	337	6	.01	235	0.42	381	25	.04	1029	1.84
289	3	.01	76	0.14	338	8	.01	243	0.43	382	27	.05	1056	1.89
290	1	.00	77	0.14	339	9	.02	252	0.45	383	33	.06	1089	1.95
291	3	.01	80	0.14	340	7	.01	259	0.46	384	38	.07	1127	2.01
293	1	.00	81	0.14	341	6	.01	265	0.47	385	40	.07	1167	2.09
294	3	.01	84	0.15	342	12	.02	277	0.50	386	46	.08	1213	2.17
295	1	.00	85	0.15	343	13	.02	290	0.52	387	55	.10	1268	2.27
296	5	.01	90	0.16	344	14	.03	304	0.54	388	37	.07	1305	2.33
298	2	.00	92	0.16	345	11	.02	315	0.56	389	47	.08	1352	2.42
299	2	.00	94	0.17	346	10	.02	325	0.58	390	44	.08	1396	2.50
300	1	.00	95	0.17	347	10	.02	335	0.60	391	57	.10	1453	2.60
302	3	.01	98	0.18	348	14	.03	349	0.62	392	42	.08	1495	2.67
304	2	.00	100	0.18	349	9	.02	358	0.64	393	62	.11	1557	2.78
305	3	.01	103	0.18	350	16	.03	374	0.67	394	72	.13	1629	2.91
306	2	.00	105	0.19	351	13	.02	387	0.69	395	67	.12	1696	3.03
307	3	.01	108	0.19	352	17	.03	404	0.72	396	49	.09	1745	3.12
308	3	.01	111	0.20	353	7	.01	411	0.73	397	51	.09	1796	3.21

Appendix 10. Writing 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
398	57	.10	1853	3.31	443	181	.32	7246	12.95	488	429	.77	20844	37.26
399	57	.10	1910	3.41	444	177	.32	7423	13.27	489	406	.73	21250	37.98
400	64	.11	1974	3.53	445	199	.36	7622	13.62	490	400	.71	21650	38.70
401	76	.14	2050	3.66	446	202	.36	7824	13.98	491	450	.80	22100	39.50
402	71	.13	2121	3.79	447	217	.39	8041	14.37	492	442	.79	22542	40.29
403	77	.14	2198	3.93	448	197	.35	8238	14.72	493	409	.73	22951	41.02
404	71	.13	2269	4.06	449	242	.43	8480	15.16	494	428	.77	23379	41.79
405	87	.16	2356	4.21	450	218	.39	8698	15.55	495	431	.77	23810	42.56
406	90	.16	2446	4.37	451	242	.43	8940	15.98	496	443	.79	24253	43.35
407	58	.10	2504	4.48	452	221	.40	9161	16.37	497	433	.77	24686	44.12
408	74	.13	2578	4.61	453	257	.46	9418	16.83	498	416	.74	25102	44.87
409	75	.13	2653	4.74	454	237	.42	9655	17.26	499	404	.72	25506	45.59
410	67	.12	2720	4.86	455	275	.49	9930	17.75	500	434	.78	25940	46.37
411	102	.18	2822	5.04	456	250	.45	10180	18.20	501	439	.78	26379	47.15
412	106	.19	2928	5.23	457	264	.47	10444	18.67	502	402	.72	26781	47.87
413	86	.15	3014	5.39	458	277	.50	10721	19.16	503	427	.76	27208	48.63
414	70	.13	3084	5.51	459	258	.46	10979	19.62	504	407	.73	27615	49.36
415	88	.16	3172	5.67	460	273	.49	11252	20.11	505	450	.80	28065	50.16
416	97	.17	3269	5.84	461	257	.46	11509	20.57	506	416	.74	28481	50.91
417	101	.18	3370	6.02	462	255	.46	11764	21.03	507	430	.77	28911	51.68
418	102	.18	3472	6.21	463	306	.55	12070	21.57	508	460	.82	29371	52.50
419	115	.21	3587	6.41	464	291	.52	12361	22.09	509	442	.79	29813	53.29
420	117	.21	3704	6.62	465	296	.53	12657	22.62	510	445	.80	30258	54.08
421	137	.24	3841	6.87	466	312	.56	12969	23.18	511	407	.73	30665	54.81
422	98	.18	3939	7.04	467	318	.57	13287	23.75	512	403	.72	31068	55.53
423	116	.21	4055	7.25	468	304	.54	13591	24.29	513	413	.74	31481	56.27
424	128	.23	4183	7.48	469	317	.57	13908	24.86	514	424	.76	31905	57.03
425	126	.23	4309	7.70	470	350	.63	14258	25.49	515	431	.77	32336	57.80
426	123	.22	4432	7.92	471	326	.58	14584	26.07	516	426	.76	32762	58.56
427	125	.22	4557	8.15	472	350	.63	14934	26.69	517	392	.70	33154	59.26
428	139	.25	4696	8.39	473	322	.58	15256	27.27	518	427	.76	33581	60.02
429	149	.27	4845	8.66	474	305	.55	15561	27.81	519	395	.71	33976	60.73
430	157	.28	5002	8.94	475	344	.61	15905	28.43	520	412	.74	34388	61.47
431	132	.24	5134	9.18	476	375	.67	16280	29.10	521	418	.75	34806	62.21
432	169	.30	5303	9.48	477	361	.65	16641	29.74	522	404	.72	35210	62.94
433	158	.28	5461	9.76	478	348	.62	16989	30.37	523	394	.70	35604	63.64
434	147	.26	5608	10.02	479	390	.70	17379	31.06	524	397	.71	36001	64.35
435	164	.29	5772	10.32	480	330	.59	17709	31.65	525	419	.75	36420	65.10
436	174	.31	5946	10.63	481	408	.73	18117	32.38	526	357	.64	36777	65.74
437	187	.33	6133	10.96	482	389	.70	18506	33.08	527	372	.66	37149	66.40
438	185	.33	6318	11.29	483	355	.63	18861	33.71	528	400	.71	37549	67.12
439	180	.32	6498	11.61	484	381	.68	19242	34.39	529	360	.64	37909	67.76
440	209	.37	6707	11.99	485	382	.68	19624	35.08	530	344	.61	38253	68.37
441	182	.33	6889	12.31	486	398	.71	20022	35.79	531	365	.65	38618	69.03
442	176	.31	7065	12.63	487	393	.70	20415	36.49	532	320	.57	38938	69.60

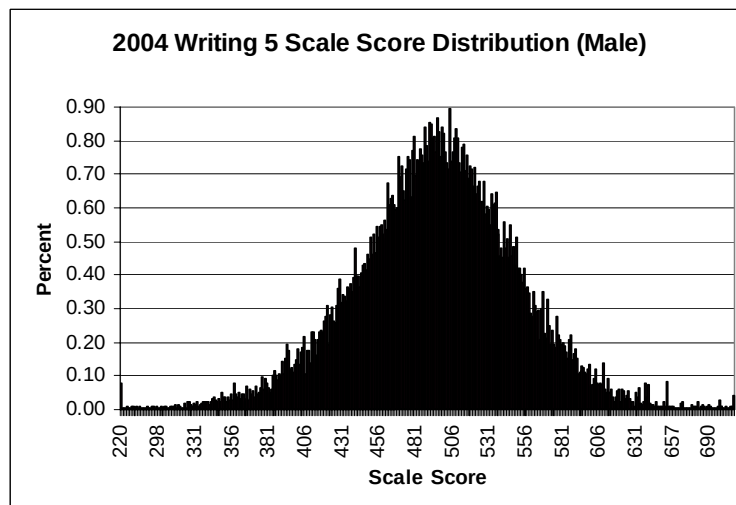
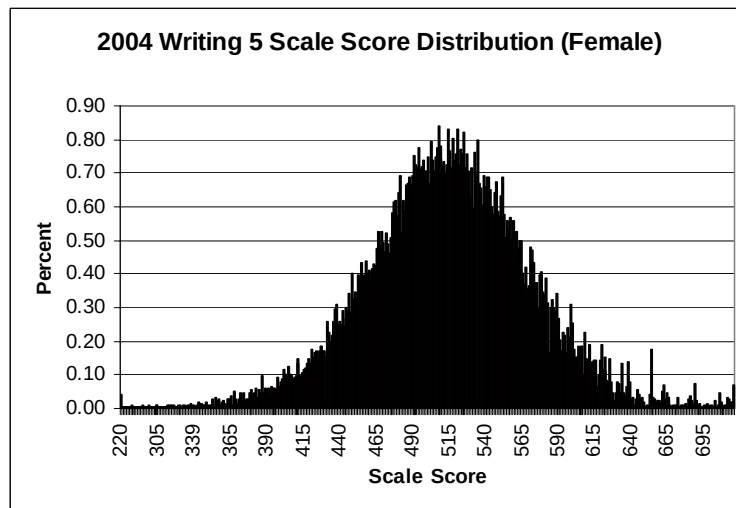
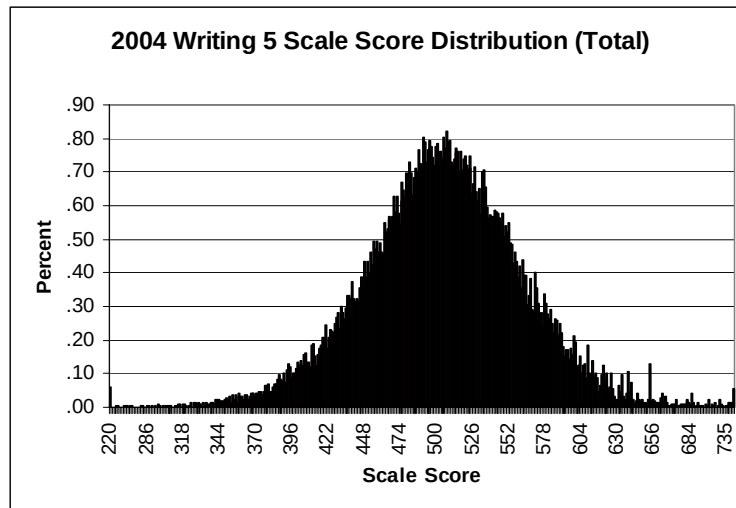
Appendix 10. Writing 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
533	392	.70	39330	70.30	578	188	.34	50841	90.88	623	57	.10	54813	97.97
534	364	.65	39694	70.95	579	174	.31	51015	91.19	624	32	.06	54845	98.03
535	394	.70	40088	71.65	580	155	.28	51170	91.46	625	33	.06	54878	98.09
536	367	.66	40455	72.31	581	147	.26	51317	91.73	626	56	.10	54934	98.19
537	332	.59	40787	72.90	582	163	.29	51480	92.02	627	31	.06	54965	98.25
538	315	.56	41102	73.47	583	140	.25	51620	92.27	628	19	.03	54984	98.28
539	320	.57	41422	74.04	584	94	.17	51714	92.44	629	12	.02	54996	98.30
540	317	.57	41739	74.61	585	125	.22	51839	92.66	630	14	.03	55010	98.33
541	318	.57	42057	75.17	586	147	.26	51986	92.92	631	36	.06	55046	98.39
542	329	.59	42386	75.76	587	145	.26	52131	93.18	632	25	.04	55071	98.44
543	326	.58	42712	76.35	588	121	.22	52252	93.40	633	22	.04	55093	98.48
544	323	.58	43035	76.92	589	140	.25	52392	93.65	634	55	.10	55148	98.57
545	293	.52	43328	77.45	590	124	.22	52516	93.87	635	18	.03	55166	98.61
546	316	.56	43644	78.01	591	101	.18	52617	94.05	636	14	.03	55180	98.63
547	306	.55	43950	78.56	592	86	.15	52703	94.20	637	24	.04	55204	98.67
548	323	.58	44273	79.14	593	78	.14	52781	94.34	638	60	.11	55264	98.78
549	283	.51	44556	79.64	594	95	.17	52876	94.51	639	26	.05	55290	98.83
550	303	.54	44859	80.18	595	96	.17	52972	94.68	640	42	.08	55332	98.90
551	293	.52	45152	80.71	596	81	.14	53053	94.83	641	13	.02	55345	98.93
552	308	.55	45460	81.26	597	98	.18	53151	95.00	642	13	.02	55358	98.95
553	273	.49	45733	81.74	598	88	.16	53239	95.16	643	6	.01	55364	98.96
554	247	.44	45980	82.19	599	119	.21	53358	95.37	644	11	.02	55375	98.98
555	272	.49	46252	82.67	600	108	.19	53466	95.57	645	22	.04	55397	99.02
556	239	.43	46491	83.10	601	68	.12	53534	95.69	646	14	.03	55411	99.04
557	258	.46	46749	83.56	602	63	.11	53597	95.80	647	11	.02	55422	99.06
558	242	.43	46991	83.99	603	69	.12	53666	95.92	648	12	.02	55434	99.08
559	218	.39	47209	84.38	604	85	.15	53751	96.08	649	7	.01	55441	99.10
560	235	.42	47444	84.80	605	57	.10	53808	96.18	650	7	.01	55448	99.11
561	199	.36	47643	85.16	606	71	.13	53879	96.31	651	4	.01	55452	99.12
562	245	.44	47888	85.60	607	73	.13	53952	96.44	652	3	.01	55455	99.12
563	219	.39	48107	85.99	608	49	.09	54001	96.52	653	13	.02	55468	99.15
564	219	.39	48326	86.38	609	102	.18	54103	96.71	654	72	.13	55540	99.27
565	220	.39	48546	86.77	610	57	.10	54160	96.81	655	10	.02	55550	99.29
566	170	.30	48716	87.08	611	54	.10	54214	96.90	656	12	.02	55562	99.31
567	187	.33	48903	87.41	612	78	.14	54292	97.04	657	10	.02	55572	99.33
568	215	.38	49118	87.80	613	37	.07	54329	97.11	658	8	.01	55580	99.35
569	162	.29	49280	88.08	614	52	.09	54381	97.20	659	7	.01	55587	99.36
570	161	.29	49441	88.37	615	56	.10	54437	97.30	660	7	.01	55594	99.37
571	225	.40	49666	88.77	616	49	.09	54486	97.39	661	5	.01	55599	99.38
572	200	.36	49866	89.13	617	25	.04	54511	97.44	662	15	.03	55614	99.41
573	173	.31	50039	89.44	618	36	.06	54547	97.50	663	24	.04	55638	99.45
574	167	.30	50206	89.74	619	55	.10	54602	97.60	664	8	.01	55646	99.46
575	154	.28	50360	90.02	620	69	.12	54671	97.72	665	18	.03	55664	99.50
576	158	.28	50518	90.30	621	38	.07	54709	97.79	666	9	.02	55673	99.51
577	135	.24	50653	90.54	622	47	.08	54756	97.87	667	2	.00	55675	99.52

Appendix 10. Writing 5 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
669	2	.00	55677	99.52	686	24	.04	55787	99.72	715	1	.00	55844	99.82
670	4	.01	55681	99.53	687	8	.01	55795	99.73	716	8	.01	55852	99.83
671	4	.01	55685	99.53	688	1	.00	55796	99.73	718	1	.00	55853	99.83
672	4	.01	55689	99.54	689	3	.01	55799	99.74	719	3	.01	55856	99.84
673	2	.00	55691	99.54	690	8	.01	55807	99.75	720	13	.02	55869	99.86
674	13	.02	55704	99.57	691	3	.01	55810	99.76	722	6	.01	55875	99.87
675	2	.00	55706	99.57	692	1	.00	55811	99.76	729	3	.01	55878	99.88
676	3	.01	55709	99.58	694	2	.00	55813	99.76	733	1	.00	55879	99.88
677	4	.01	55713	99.58	695	2	.00	55815	99.77	735	2	.00	55881	99.88
678	5	.01	55718	99.59	696	1	.00	55816	99.77	738	3	.01	55884	99.89
680	4	.01	55722	99.60	697	6	.01	55822	99.78	739	9	.02	55893	99.91
681	4	.01	55726	99.61	698	2	.00	55824	99.78	741	8	.01	55901	99.92
682	14	.03	55740	99.63	699	12	.02	55836	99.80	742	7	.01	55908	99.93
683	11	.02	55751	99.65	700	1	.00	55837	99.81	746	7	.01	55915	99.94
684	8	.01	55759	99.67	701	4	.01	55841	99.81	780	31	.06	55946	100.00
685	4	.01	55763	99.67	706	2	.00	55843	99.82					

Figure 10. Writing 5 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 11. Mathematics 5 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
220	96	0.17	96	0.17	272	5	0.01	230	0.41	316	14	0.02	572	1.02
221	3	0.01	99	0.18	273	4	0.01	234	0.42	317	18	0.03	590	1.05
222	1	0.00	100	0.18	274	5	0.01	239	0.43	318	15	0.03	605	1.08
224	1	0.00	101	0.18	275	4	0.01	243	0.43	319	8	0.01	613	1.09
225	1	0.00	102	0.18	276	4	0.01	247	0.44	320	15	0.03	628	1.12
227	3	0.01	105	0.19	277	7	0.01	254	0.45	321	15	0.03	643	1.15
228	1	0.00	106	0.19	278	3	0.01	257	0.46	322	20	0.04	663	1.18
230	2	0.00	108	0.19	279	7	0.01	264	0.47	323	11	0.02	674	1.20
231	3	0.01	111	0.20	280	5	0.01	269	0.48	324	17	0.03	691	1.23
232	4	0.01	115	0.20	281	7	0.01	276	0.49	325	20	0.04	711	1.27
233	4	0.01	119	0.21	282	7	0.01	283	0.50	326	12	0.02	723	1.29
234	2	0.00	121	0.22	283	4	0.01	287	0.51	327	12	0.02	735	1.31
235	2	0.00	123	0.22	284	2	0.00	289	0.51	328	8	0.01	743	1.32
236	2	0.00	125	0.22	285	5	0.01	294	0.52	329	18	0.03	761	1.36
237	2	0.00	127	0.23	286	11	0.02	305	0.54	330	16	0.03	777	1.38
238	1	0.00	128	0.23	287	4	0.01	309	0.55	331	22	0.04	799	1.42
240	3	0.01	131	0.23	288	7	0.01	316	0.56	332	18	0.03	817	1.46
241	2	0.00	133	0.24	289	5	0.01	321	0.57	333	14	0.02	831	1.48
242	4	0.01	137	0.24	290	12	0.02	333	0.59	334	22	0.04	853	1.52
243	2	0.00	139	0.25	291	5	0.01	338	0.60	335	16	0.03	869	1.55
244	4	0.01	143	0.25	292	6	0.01	344	0.61	336	34	0.06	903	1.61
245	2	0.00	145	0.26	293	10	0.02	354	0.63	337	14	0.02	917	1.63
246	3	0.01	148	0.26	294	6	0.01	360	0.64	338	20	0.04	937	1.67
249	1	0.00	149	0.27	295	4	0.01	364	0.65	339	20	0.04	957	1.70
250	3	0.01	152	0.27	296	12	0.02	376	0.67	340	18	0.03	975	1.74
251	2	0.00	154	0.27	297	6	0.01	382	0.68	341	21	0.04	996	1.77
252	2	0.00	156	0.28	298	10	0.02	392	0.70	342	25	0.04	1021	1.82
253	5	0.01	161	0.29	299	11	0.02	403	0.72	343	20	0.04	1041	1.85
254	4	0.01	165	0.29	300	9	0.02	412	0.73	344	19	0.03	1060	1.89
256	6	0.01	171	0.30	301	8	0.01	420	0.75	345	23	0.04	1083	1.93
257	4	0.01	175	0.31	302	5	0.01	425	0.76	346	27	0.05	1110	1.98
258	3	0.01	178	0.32	303	5	0.01	430	0.77	347	25	0.04	1135	2.02
259	1	0.00	179	0.32	304	14	0.02	444	0.79	348	22	0.04	1157	2.06
260	4	0.01	183	0.33	305	9	0.02	453	0.81	349	26	0.05	1183	2.11
261	6	0.01	189	0.34	306	15	0.03	468	0.83	350	27	0.05	1210	2.16
262	3	0.01	192	0.34	307	12	0.02	480	0.86	351	21	0.04	1231	2.19
263	3	0.01	195	0.35	308	8	0.01	488	0.87	352	36	0.06	1267	2.26
264	2	0.00	197	0.35	309	6	0.01	494	0.88	353	34	0.06	1301	2.32
265	5	0.01	202	0.36	310	12	0.02	506	0.90	354	26	0.05	1327	2.36
266	3	0.01	205	0.37	311	9	0.02	515	0.92	355	19	0.03	1346	2.40
267	4	0.01	209	0.37	312	11	0.02	526	0.94	356	33	0.06	1379	2.46
269	2	0.00	211	0.38	313	10	0.02	536	0.95	357	31	0.06	1410	2.51
270	8	0.01	219	0.39	314	10	0.02	546	0.97	358	35	0.06	1445	2.57
271	6	0.01	225	0.40	315	12	0.02	558	0.99	359	38	0.07	1483	2.64

Appendix 11. Mathematics 5 Scale Score Distribution (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
360	28	0.05	1511	2.69	405	109	0.19	4358	7.76	450	198	0.35	11266	20.07
361	34	0.06	1545	2.75	406	94	0.17	4452	7.93	451	200	0.36	11466	20.43
362	35	0.06	1580	2.81	407	99	0.18	4551	8.11	452	176	0.31	11642	20.74
363	48	0.09	1628	2.90	408	122	0.22	4673	8.32	453	242	0.43	11884	21.17
364	27	0.05	1655	2.95	409	94	0.17	4767	8.49	454	232	0.41	12116	21.58
365	31	0.06	1686	3.00	410	103	0.18	4870	8.68	455	242	0.43	12358	22.01
366	40	0.07	1726	3.07	411	104	0.19	4974	8.86	456	214	0.38	12572	22.40
367	38	0.07	1764	3.14	412	116	0.21	5090	9.07	457	256	0.46	12828	22.85
368	43	0.08	1807	3.22	413	118	0.21	5208	9.28	458	221	0.39	13049	23.24
369	57	0.10	1864	3.32	414	130	0.23	5338	9.51	459	222	0.40	13271	23.64
370	33	0.06	1897	3.38	415	127	0.23	5465	9.74	460	247	0.44	13518	24.08
371	47	0.08	1944	3.46	416	129	0.23	5594	9.96	461	249	0.44	13767	24.52
372	46	0.08	1990	3.54	417	127	0.23	5721	10.19	462	240	0.43	14007	24.95
373	43	0.08	2033	3.62	418	135	0.24	5856	10.43	463	234	0.42	14241	25.37
374	54	0.10	2087	3.72	419	101	0.18	5957	10.61	464	243	0.43	14484	25.80
375	55	0.10	2142	3.82	420	129	0.23	6086	10.84	465	256	0.46	14740	26.26
376	55	0.10	2197	3.91	421	152	0.27	6238	11.11	466	277	0.49	15017	26.75
377	54	0.10	2251	4.01	422	154	0.27	6392	11.39	467	252	0.45	15269	27.20
378	59	0.11	2310	4.11	423	147	0.26	6539	11.65	468	261	0.46	15530	27.66
379	58	0.10	2368	4.22	424	152	0.27	6691	11.92	469	295	0.53	15825	28.19
380	53	0.09	2421	4.31	425	151	0.27	6842	12.19	470	246	0.44	16071	28.63
381	55	0.10	2476	4.41	426	159	0.28	7001	12.47	471	273	0.49	16344	29.11
382	63	0.11	2539	4.52	427	144	0.26	7145	12.73	472	267	0.48	16611	29.59
383	65	0.12	2604	4.64	428	154	0.27	7299	13.00	473	270	0.48	16881	30.07
384	65	0.12	2669	4.75	429	150	0.27	7449	13.27	474	267	0.48	17148	30.55
385	55	0.10	2724	4.85	430	161	0.29	7610	13.56	475	289	0.51	17437	31.06
386	60	0.11	2784	4.96	431	174	0.31	7784	13.87	476	265	0.47	17702	31.53
387	67	0.12	2851	5.08	432	141	0.25	7925	14.12	477	304	0.54	18006	32.08
388	54	0.10	2905	5.17	433	182	0.32	8107	14.44	478	249	0.44	18255	32.52
389	73	0.13	2978	5.30	434	158	0.28	8265	14.72	479	307	0.55	18562	33.07
390	69	0.12	3047	5.43	435	189	0.34	8454	15.06	480	274	0.49	18836	33.55
391	76	0.14	3123	5.56	436	162	0.29	8616	15.35	481	291	0.52	19127	34.07
392	69	0.12	3192	5.69	437	165	0.29	8781	15.64	482	290	0.52	19417	34.59
393	87	0.15	3279	5.84	438	192	0.34	8973	15.98	483	293	0.52	19710	35.11
394	81	0.14	3360	5.99	439	187	0.33	9160	16.32	484	289	0.51	19999	35.63
395	81	0.14	3441	6.13	440	206	0.37	9366	16.68	485	289	0.51	20288	36.14
396	80	0.14	3521	6.27	441	174	0.31	9540	16.99	486	309	0.55	20597	36.69
397	83	0.15	3604	6.42	442	176	0.31	9716	17.31	487	323	0.58	20920	37.27
398	83	0.15	3687	6.57	443	191	0.34	9907	17.65	488	355	0.63	21275	37.90
399	103	0.18	3790	6.75	444	182	0.32	10089	17.97	489	304	0.54	21579	38.44
400	89	0.16	3879	6.91	445	206	0.37	10295	18.34	490	315	0.56	21894	39.00
401	90	0.16	3969	7.07	446	183	0.33	10478	18.67	491	301	0.54	22195	39.54
402	90	0.16	4059	7.23	447	191	0.34	10669	19.01	492	298	0.53	22493	40.07
403	108	0.19	4167	7.42	448	203	0.36	10872	19.37	493	314	0.56	22807	40.63
404	82	0.15	4249	7.57	449	196	0.35	11068	19.72	494	316	0.56	23123	41.19

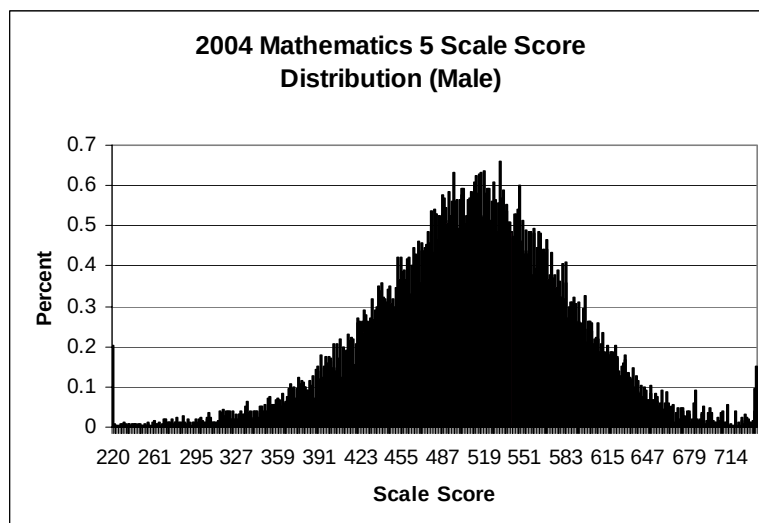
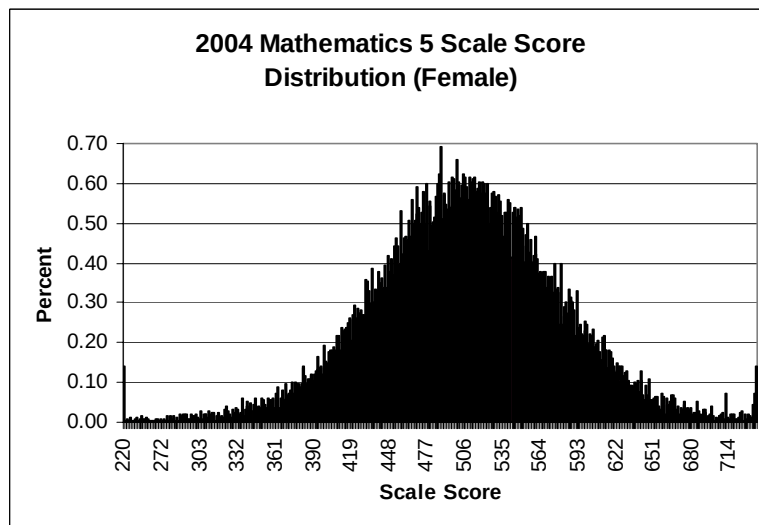
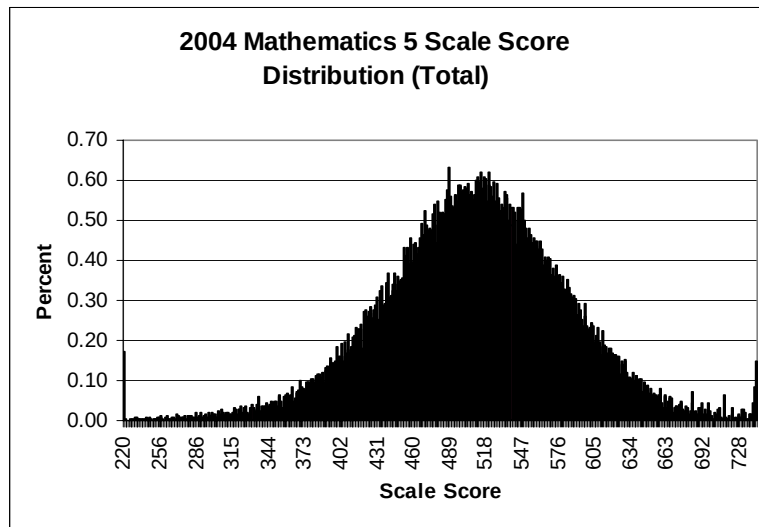
Appendix 11. Mathematics 5 Scale Score Distribution (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
495	308	0.55	23431	41.74	540	299	0.53	37736	67.22	585	153	0.27	48261	85.97
496	331	0.59	23762	42.33	541	291	0.52	38027	67.74	586	177	0.32	48438	86.29
497	330	0.59	24092	42.92	542	248	0.44	38275	68.18	587	173	0.31	48611	86.59
498	328	0.58	24420	43.50	543	280	0.50	38555	68.68	588	175	0.31	48786	86.91
499	322	0.57	24742	44.07	544	299	0.53	38854	69.21	589	162	0.29	48948	87.19
500	323	0.58	25065	44.65	545	299	0.53	39153	69.75	590	170	0.30	49118	87.50
501	327	0.58	25392	45.23	546	297	0.53	39450	70.27	591	148	0.26	49266	87.76
502	325	0.58	25717	45.81	547	319	0.57	39769	70.84	592	164	0.29	49430	88.05
503	320	0.57	26037	46.38	548	275	0.49	40044	71.33	593	154	0.27	49584	88.33
504	333	0.59	26370	46.97	549	281	0.50	40325	71.83	594	135	0.24	49719	88.57
505	316	0.56	26686	47.54	550	269	0.48	40594	72.31	595	141	0.25	49860	88.82
506	321	0.57	27007	48.11	551	256	0.46	40850	72.77	596	133	0.24	49993	89.06
507	306	0.55	27313	48.65	552	236	0.42	41086	73.19	597	145	0.26	50138	89.31
508	309	0.55	27622	49.20	553	270	0.48	41356	73.67	598	163	0.29	50301	89.60
509	317	0.56	27939	49.77	554	260	0.46	41616	74.13	599	133	0.24	50434	89.84
510	337	0.60	28276	50.37	555	249	0.44	41865	74.58	600	128	0.23	50562	90.07
511	318	0.57	28594	50.94	556	257	0.46	42122	75.03	601	130	0.23	50692	90.30
512	342	0.61	28936	51.55	557	235	0.42	42357	75.45	602	136	0.24	50828	90.54
513	335	0.60	29271	52.14	558	252	0.45	42609	75.90	603	134	0.24	50962	90.78
514	349	0.62	29620	52.76	559	252	0.45	42861	76.35	604	133	0.24	51095	91.02
515	326	0.58	29946	53.34	560	241	0.43	43102	76.78	605	111	0.20	51206	91.22
516	342	0.61	30288	53.95	561	244	0.43	43346	77.21	606	115	0.20	51321	91.42
517	316	0.56	30604	54.52	562	251	0.45	43597	77.66	607	118	0.21	51439	91.63
518	339	0.60	30943	55.12	563	240	0.43	43837	78.09	608	130	0.23	51569	91.86
519	308	0.55	31251	55.67	564	218	0.39	44055	78.48	609	111	0.20	51680	92.06
520	348	0.62	31599	56.29	565	224	0.40	44279	78.88	610	93	0.17	51773	92.23
521	331	0.59	31930	56.88	566	230	0.41	44509	79.29	611	103	0.18	51876	92.41
522	328	0.58	32258	57.46	567	225	0.40	44734	79.69	612	126	0.22	52002	92.63
523	314	0.56	32572	58.02	568	230	0.41	44964	80.10	613	106	0.19	52108	92.82
524	334	0.59	32906	58.62	569	226	0.40	45190	80.50	614	103	0.18	52211	93.01
525	284	0.51	33190	59.12	570	205	0.37	45395	80.86	615	88	0.16	52299	93.16
526	308	0.55	33498	59.67	571	201	0.36	45596	81.22	616	95	0.17	52394	93.33
527	333	0.59	33831	60.27	572	214	0.38	45810	81.60	617	100	0.18	52494	93.51
528	311	0.55	34142	60.82	573	202	0.36	46012	81.96	618	102	0.18	52596	93.69
529	291	0.52	34433	61.34	574	195	0.35	46207	82.31	619	95	0.17	52691	93.86
530	295	0.53	34728	61.86	575	218	0.39	46425	82.70	620	92	0.16	52783	94.03
531	304	0.54	35032	62.40	576	191	0.34	46616	83.04	621	81	0.14	52864	94.17
532	299	0.53	35331	62.94	577	205	0.37	46821	83.40	622	92	0.16	52956	94.33
533	321	0.57	35652	63.51	578	193	0.34	47014	83.75	623	90	0.16	53046	94.49
534	316	0.56	35968	64.07	579	161	0.29	47175	84.04	624	89	0.16	53135	94.65
535	311	0.55	36279	64.63	580	202	0.36	47377	84.40	625	78	0.14	53213	94.79
536	281	0.50	36560	65.13	581	184	0.33	47561	84.72	626	66	0.12	53279	94.91
537	303	0.54	36863	65.67	582	164	0.29	47725	85.02	627	83	0.15	53362	95.06
538	299	0.53	37162	66.20	583	197	0.35	47922	85.37	628	78	0.14	53440	95.20
539	275	0.49	37437	66.69	584	186	0.33	48108	85.70	629	86	0.15	53526	95.35

Appendix 11. Mathematics 5 Scale Score Distribution (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
630	83	0.15	53609	95.50	666	34	0.06	55180	98.30	702	11	0.02	55748	99.31
631	68	0.12	53677	95.62	667	32	0.06	55212	98.35	703	9	0.02	55757	99.32
632	61	0.11	53738	95.73	668	12	0.02	55224	98.37	704	15	0.03	55772	99.35
633	61	0.11	53799	95.84	669	18	0.03	55242	98.41	705	18	0.03	55790	99.38
634	58	0.10	53857	95.94	670	21	0.04	55263	98.44	706	3	0.01	55793	99.39
635	58	0.10	53915	96.04	671	20	0.04	55283	98.48	707	4	0.01	55797	99.39
636	67	0.12	53982	96.16	672	16	0.03	55299	98.51	708	3	0.01	55800	99.40
637	57	0.10	54039	96.26	673	23	0.04	55322	98.55	710	36	0.06	55836	99.46
638	63	0.11	54102	96.37	674	28	0.05	55350	98.60	711	4	0.01	55840	99.47
639	62	0.11	54164	96.49	675	24	0.04	55374	98.64	714	3	0.01	55843	99.48
640	46	0.08	54210	96.57	676	16	0.03	55390	98.67	715	2	0.00	55845	99.48
641	59	0.11	54269	96.67	677	14	0.02	55404	98.69	719	6	0.01	55851	99.49
642	59	0.11	54328	96.78	678	21	0.04	55425	98.73	720	1	0.00	55852	99.49
643	41	0.07	54369	96.85	679	14	0.02	55439	98.76	721	8	0.01	55860	99.51
644	34	0.06	54403	96.91	680	19	0.03	55458	98.79	722	17	0.03	55877	99.54
645	54	0.10	54457	97.01	681	8	0.01	55466	98.80	723	2	0.00	55879	99.54
646	45	0.08	54502	97.09	682	13	0.02	55479	98.83	724	4	0.01	55883	99.55
647	50	0.09	54552	97.18	683	24	0.04	55503	98.87	725	3	0.01	55886	99.55
648	34	0.06	54586	97.24	684	40	0.07	55543	98.94	727	7	0.01	55893	99.57
649	39	0.07	54625	97.31	685	8	0.01	55551	98.96	728	10	0.02	55903	99.58
650	45	0.08	54670	97.39	686	14	0.02	55565	98.98	730	4	0.01	55907	99.59
651	36	0.06	54706	97.45	687	10	0.02	55575	99.00	731	16	0.03	55923	99.62
652	37	0.07	54743	97.52	688	9	0.02	55584	99.01	732	15	0.03	55938	99.65
653	39	0.07	54782	97.59	689	18	0.03	55602	99.05	733	1	0.00	55939	99.65
654	36	0.06	54818	97.65	690	17	0.03	55619	99.08	734	12	0.02	55951	99.67
655	33	0.06	54851	97.71	691	24	0.04	55643	99.12	736	3	0.01	55954	99.67
656	24	0.04	54875	97.75	692	5	0.01	55648	99.13	737	2	0.00	55956	99.68
657	37	0.07	54912	97.82	693	9	0.02	55657	99.14	741	9	0.02	55965	99.69
658	44	0.08	54956	97.90	694	16	0.03	55673	99.17	742	8	0.01	55973	99.71
659	25	0.04	54981	97.94	695	8	0.01	55681	99.19	745	8	0.01	55981	99.72
660	19	0.03	55000	97.97	696	25	0.04	55706	99.23	747	24	0.04	56005	99.76
661	33	0.06	55033	98.03	697	14	0.02	55720	99.26	748	47	0.08	56052	99.85
662	37	0.07	55070	98.10	698	6	0.01	55726	99.27	750	2	0.00	56054	99.85
663	18	0.03	55088	98.13	699	6	0.01	55732	99.28	800	83	0.15	56137	100.00
664	26	0.05	55114	98.18	700	3	0.01	55735	99.28					
665	32	0.06	55146	98.23	701	2	0.00	55737	99.29					

Figure 11. Mathematics 5 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 12. Reading 6 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
260	222	.39	222	0.39	329	4	.01	315	0.55	373	2	.00	468	0.82
267	2	.00	224	0.39	330	5	.01	320	0.56	374	5	.01	473	0.83
272	1	.00	225	0.40	331	4	.01	324	0.57	375	6	.01	479	0.84
273	1	.00	226	0.40	332	5	.01	329	0.58	376	8	.01	487	0.86
276	2	.00	228	0.40	333	2	.00	331	0.58	377	5	.01	492	0.86
278	1	.00	229	0.40	334	3	.01	334	0.59	378	10	.02	502	0.88
279	2	.00	231	0.41	335	2	.00	336	0.59	379	4	.01	506	0.89
280	3	.01	234	0.41	336	1	.00	337	0.59	380	5	.01	511	0.90
281	1	.00	235	0.41	337	4	.01	341	0.60	381	3	.01	514	0.90
282	1	.00	236	0.41	338	2	.00	343	0.60	382	5	.01	519	0.91
285	2	.00	238	0.42	339	5	.01	348	0.61	383	3	.01	522	0.92
286	2	.00	240	0.42	340	4	.01	352	0.62	384	7	.01	529	0.93
289	1	.00	241	0.42	341	4	.01	356	0.63	385	4	.01	533	0.94
290	1	.00	242	0.43	342	3	.01	359	0.63	386	3	.01	536	0.94
292	2	.00	244	0.43	343	2	.00	361	0.63	387	5	.01	541	0.95
293	2	.00	246	0.43	344	3	.01	364	0.64	388	4	.01	545	0.96
295	2	.00	248	0.44	345	1	.00	365	0.64	389	7	.01	552	0.97
296	1	.00	249	0.44	346	8	.01	373	0.66	390	5	.01	557	0.98
299	2	.00	251	0.44	347	1	.00	374	0.66	391	8	.01	565	0.99
300	2	.00	253	0.44	348	2	.00	376	0.66	392	6	.01	571	1.00
301	1	.00	254	0.45	349	3	.01	379	0.67	393	7	.01	578	1.02
302	1	.00	255	0.45	350	1	.00	380	0.67	394	8	.01	586	1.03
303	1	.00	256	0.45	351	6	.01	386	0.68	395	4	.01	590	1.04
304	2	.00	258	0.45	352	4	.01	390	0.69	396	9	.02	599	1.05
306	1	.00	259	0.46	353	3	.01	393	0.69	397	6	.01	605	1.06
309	3	.01	262	0.46	354	4	.01	397	0.70	398	4	.01	609	1.07
310	3	.01	265	0.47	355	2	.00	399	0.70	399	4	.01	613	1.08
311	2	.00	267	0.47	356	2	.00	401	0.70	400	11	.02	624	1.10
312	5	.01	272	0.48	357	3	.01	404	0.71	401	5	.01	629	1.11
313	1	.00	273	0.48	358	3	.01	407	0.72	402	6	.01	635	1.12
314	1	.00	274	0.48	359	1	.00	408	0.72	403	6	.01	641	1.13
315	1	.00	275	0.48	360	6	.01	414	0.73	404	8	.01	649	1.14
316	5	.01	280	0.49	361	4	.01	418	0.73	405	8	.01	657	1.15
317	3	.01	283	0.50	362	4	.01	422	0.74	406	10	.02	667	1.17
318	2	.00	285	0.50	363	3	.01	425	0.75	407	12	.02	679	1.19
319	3	.01	288	0.51	364	5	.01	430	0.76	408	7	.01	686	1.21
320	2	.00	290	0.51	365	4	.01	434	0.76	409	12	.02	698	1.23
321	6	.01	296	0.52	366	1	.00	435	0.76	410	6	.01	704	1.24
322	4	.01	300	0.53	367	3	.01	438	0.77	411	13	.02	717	1.26
323	2	.00	302	0.53	368	8	.01	446	0.78	412	6	.01	723	1.27
324	3	.01	305	0.54	369	5	.01	451	0.79	413	11	.02	734	1.29
325	2	.00	307	0.54	370	4	.01	455	0.80	414	7	.01	741	1.30
326	2	.00	309	0.54	371	4	.01	459	0.81	415	11	.02	752	1.32
327	2	.00	311	0.55	372	7	.01	466	0.82	416	5	.01	757	1.33

Appendix 12. Reading 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
417	9	.02	766	1.35	462	26	.05	1430	2.51	507	73	.13	3205	5.63
418	7	.01	773	1.36	463	17	.03	1447	2.54	508	64	.11	3269	5.75
419	6	.01	779	1.37	464	29	.05	1476	2.59	509	46	.08	3315	5.83
420	7	.01	786	1.38	465	32	.06	1508	2.65	510	63	.11	3378	5.94
421	11	.02	797	1.40	466	29	.05	1537	2.70	511	62	.11	3440	6.05
422	13	.02	810	1.42	467	23	.04	1560	2.74	512	75	.13	3515	6.18
423	8	.01	818	1.44	468	26	.05	1586	2.79	513	64	.11	3579	6.29
424	11	.02	829	1.46	469	37	.07	1623	2.85	514	74	.13	3653	6.42
425	11	.02	840	1.48	470	33	.06	1656	2.91	515	82	.14	3735	6.57
426	10	.02	850	1.49	471	33	.06	1689	2.97	516	71	.12	3806	6.69
427	11	.02	861	1.51	472	22	.04	1711	3.01	517	77	.14	3883	6.83
428	17	.03	878	1.54	473	39	.07	1750	3.08	518	73	.13	3956	6.95
429	12	.02	890	1.56	474	27	.05	1777	3.12	519	72	.13	4028	7.08
430	10	.02	900	1.58	475	24	.04	1801	3.17	520	77	.14	4105	7.22
431	16	.03	916	1.61	476	27	.05	1828	3.21	521	81	.14	4186	7.36
432	18	.03	934	1.64	477	27	.05	1855	3.26	522	83	.15	4269	7.50
433	16	.03	950	1.67	478	41	.07	1896	3.33	523	74	.13	4343	7.63
434	7	.01	957	1.68	479	33	.06	1929	3.39	524	97	.17	4440	7.81
435	8	.01	965	1.70	480	29	.05	1958	3.44	525	87	.15	4527	7.96
436	12	.02	977	1.72	481	47	.08	2005	3.52	526	113	.20	4640	8.16
437	12	.02	989	1.74	482	36	.06	2041	3.59	527	85	.15	4725	8.31
438	6	.01	995	1.75	483	35	.06	2076	3.65	528	101	.18	4826	8.48
439	20	.04	1015	1.78	484	42	.07	2118	3.72	529	107	.19	4933	8.67
440	20	.04	1035	1.82	485	36	.06	2154	3.79	530	96	.17	5029	8.84
441	12	.02	1047	1.84	486	45	.08	2199	3.87	531	100	.18	5129	9.02
442	13	.02	1060	1.86	487	43	.08	2242	3.94	532	95	.17	5224	9.18
443	20	.04	1080	1.90	488	30	.05	2272	3.99	533	90	.16	5314	9.34
444	15	.03	1095	1.92	489	39	.07	2311	4.06	534	112	.20	5426	9.54
445	15	.03	1110	1.95	490	38	.07	2349	4.13	535	105	.18	5531	9.72
446	19	.03	1129	1.98	491	39	.07	2388	4.20	536	99	.17	5630	9.90
447	19	.03	1148	2.02	492	51	.09	2439	4.29	537	105	.18	5735	10.08
448	16	.03	1164	2.05	493	37	.07	2476	4.35	538	111	.20	5846	10.28
449	19	.03	1183	2.08	494	45	.08	2521	4.43	539	111	.20	5957	10.47
450	12	.02	1195	2.10	495	43	.08	2564	4.51	540	102	.18	6059	10.65
451	14	.02	1209	2.13	496	45	.08	2609	4.59	541	111	.20	6170	10.85
452	20	.04	1229	2.16	497	54	.09	2663	4.68	542	118	.21	6288	11.05
453	11	.02	1240	2.18	498	39	.07	2702	4.75	543	143	.25	6431	11.31
454	21	.04	1261	2.22	499	56	.10	2758	4.85	544	130	.23	6561	11.53
455	10	.02	1271	2.23	500	34	.06	2792	4.91	545	130	.23	6691	11.76
456	29	.05	1300	2.29	501	58	.10	2850	5.01	546	144	.25	6835	12.02
457	17	.03	1317	2.32	502	58	.10	2908	5.11	547	141	.25	6976	12.26
458	20	.04	1337	2.35	503	59	.10	2967	5.22	548	126	.22	7102	12.48
459	23	.04	1360	2.39	504	54	.09	3021	5.31	549	140	.25	7242	12.73
460	25	.04	1385	2.43	505	71	.12	3092	5.44	550	136	.24	7378	12.97
461	19	.03	1404	2.47	506	40	.07	3132	5.51	551	129	.23	7507	13.20

Appendix 12. Reading 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
552	151	.27	7658	13.46	597	283	.50	17417	30.62	642	374	.66	32862	57.77
553	158	.28	7816	13.74	598	271	.48	17688	31.09	643	366	.64	33228	58.41
554	159	.28	7975	14.02	599	299	.53	17987	31.62	644	349	.61	33577	59.03
555	136	.24	8111	14.26	600	298	.52	18285	32.14	645	383	.67	33960	59.70
556	155	.27	8266	14.53	601	298	.52	18583	32.67	646	339	.60	34299	60.29
557	155	.27	8421	14.80	602	290	.51	18873	33.18	647	368	.65	34667	60.94
558	161	.28	8582	15.09	603	300	.53	19173	33.70	648	386	.68	35053	61.62
559	161	.28	8743	15.37	604	327	.57	19500	34.28	649	375	.66	35428	62.28
560	169	.30	8912	15.67	605	297	.52	19797	34.80	650	353	.62	35781	62.90
561	187	.33	9099	16.00	606	326	.57	20123	35.37	651	370	.65	36151	63.55
562	186	.33	9285	16.32	607	315	.55	20438	35.93	652	354	.62	36505	64.17
563	173	.30	9458	16.63	608	329	.58	20767	36.51	653	348	.61	36853	64.78
564	190	.33	9648	16.96	609	348	.61	21115	37.12	654	332	.58	37185	65.37
565	172	.30	9820	17.26	610	329	.58	21444	37.70	655	364	.64	37549	66.01
566	201	.35	10021	17.62	611	313	.55	21757	38.25	656	340	.60	37889	66.61
567	194	.34	10215	17.96	612	273	.48	22030	38.73	657	341	.60	38230	67.20
568	191	.34	10406	18.29	613	358	.63	22388	39.36	658	332	.58	38562	67.79
569	201	.35	10607	18.65	614	358	.63	22746	39.99	659	363	.64	38925	68.43
570	207	.36	10814	19.01	615	344	.60	23090	40.59	660	380	.67	39305	69.09
571	200	.35	11014	19.36	616	338	.59	23428	41.18	661	381	.67	39686	69.76
572	204	.36	11218	19.72	617	361	.63	23789	41.82	662	351	.62	40037	70.38
573	206	.36	11424	20.08	618	366	.64	24155	42.46	663	361	.63	40398	71.02
574	206	.36	11630	20.44	619	350	.62	24505	43.08	664	346	.61	40744	71.62
575	234	.41	11864	20.86	620	382	.67	24887	43.75	665	373	.66	41117	72.28
576	204	.36	12068	21.21	621	336	.59	25223	44.34	666	311	.55	41428	72.83
577	211	.37	12279	21.59	622	366	.64	25589	44.98	667	354	.62	41782	73.45
578	229	.40	12508	21.99	623	318	.56	25907	45.54	668	360	.63	42142	74.08
579	243	.43	12751	22.42	624	360	.63	26267	46.17	669	346	.61	42488	74.69
580	244	.43	12995	22.84	625	371	.65	26638	46.83	670	342	.60	42830	75.29
581	247	.43	13242	23.28	626	330	.58	26968	47.41	671	316	.56	43146	75.85
582	252	.44	13494	23.72	627	367	.65	27335	48.05	672	332	.58	43478	76.43
583	242	.43	13736	24.15	628	371	.65	27706	48.70	673	278	.49	43756	76.92
584	256	.45	13992	24.60	629	334	.59	28040	49.29	674	313	.55	44069	77.47
585	253	.44	14245	25.04	630	384	.68	28424	49.97	675	306	.54	44375	78.01
586	252	.44	14497	25.48	631	363	.64	28787	50.60	676	277	.49	44652	78.49
587	247	.43	14744	25.92	632	337	.59	29124	51.20	677	302	.53	44954	79.02
588	257	.45	15001	26.37	633	381	.67	29505	51.87	678	285	.50	45239	79.53
589	257	.45	15258	26.82	634	372	.65	29877	52.52	679	317	.56	45556	80.08
590	272	.48	15530	27.30	635	369	.65	30246	53.17	680	277	.49	45833	80.57
591	270	.47	15800	27.77	636	354	.62	30600	53.79	681	269	.47	46102	81.04
592	263	.46	16063	28.24	637	363	.64	30963	54.43	682	290	.51	46392	81.55
593	230	.40	16293	28.64	638	369	.65	31332	55.08	683	275	.48	46667	82.04
594	279	.49	16572	29.13	639	392	.69	31724	55.77	684	266	.47	46933	82.50
595	265	.47	16837	29.60	640	384	.68	32108	56.44	685	261	.46	47194	82.96
596	297	.52	17134	30.12	641	380	.67	32488	57.11	686	259	.46	47453	83.42

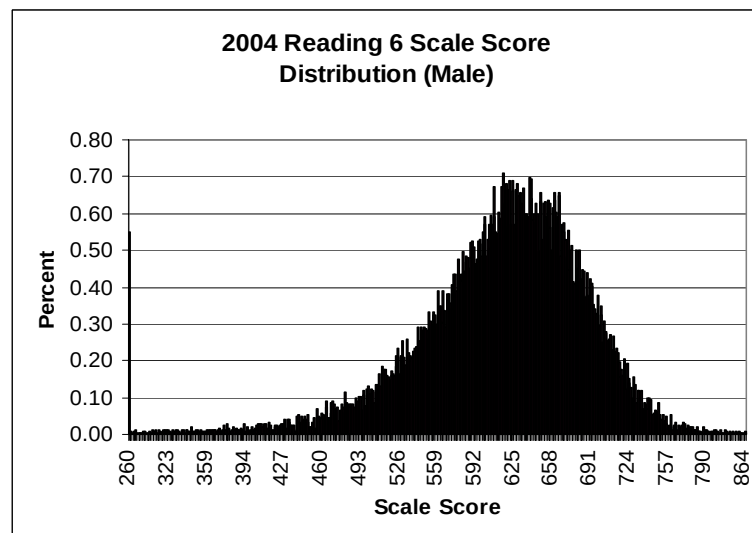
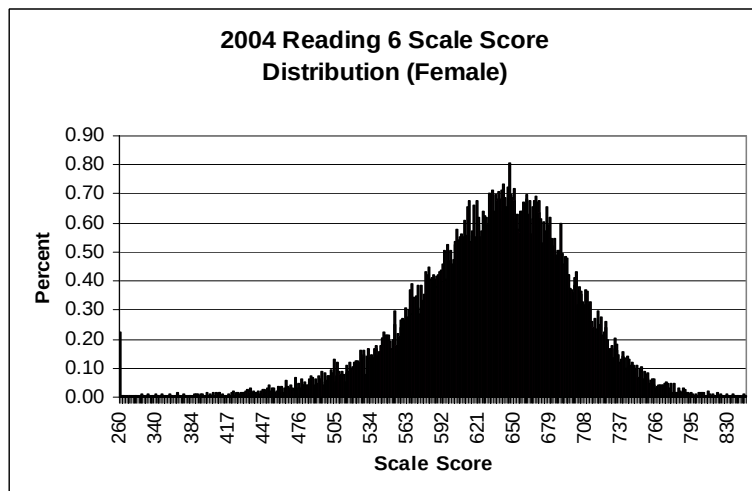
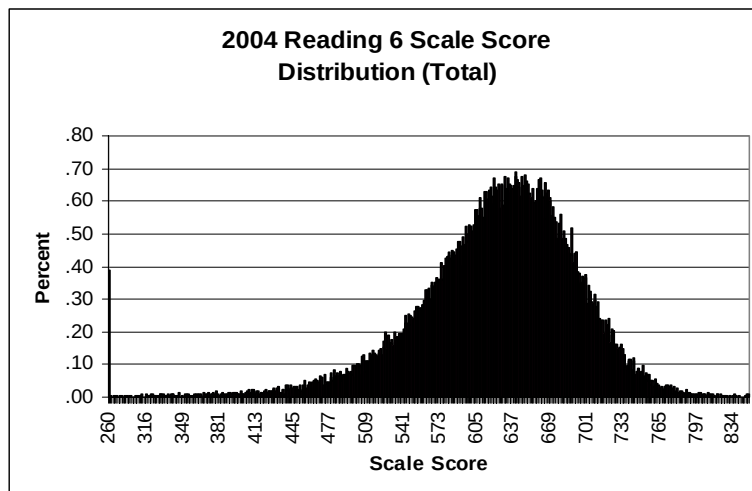
Appendix 12. Reading 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
687	249	.44	47702	83.86	732	91	.16	54917	96.54	777	5	.01	56585	99.47
688	294	.52	47996	84.37	733	85	.15	55002	96.69	778	19	.03	56604	99.50
689	248	.44	48244	84.81	734	74	.13	55076	96.82	779	11	.02	56615	99.52
690	233	.41	48477	85.22	735	74	.13	55150	96.95	780	16	.03	56631	99.55
691	250	.44	48727	85.66	736	53	.09	55203	97.04	781	9	.02	56640	99.57
692	252	.44	48979	86.10	737	56	.10	55259	97.14	782	7	.01	56647	99.58
693	253	.44	49232	86.55	738	64	.11	55323	97.25	783	10	.02	56657	99.60
694	219	.38	49451	86.93	739	67	.12	55390	97.37	784	11	.02	56668	99.62
695	216	.38	49667	87.31	740	65	.11	55455	97.48	785	8	.01	56676	99.63
696	200	.35	49867	87.66	741	48	.08	55503	97.57	786	7	.01	56683	99.64
697	198	.35	50065	88.01	742	68	.12	55571	97.69	787	6	.01	56689	99.65
698	210	.37	50275	88.38	743	63	.11	55634	97.80	788	9	.02	56698	99.67
699	201	.35	50476	88.73	744	39	.07	55673	97.87	789	13	.02	56711	99.69
700	209	.37	50685	89.10	745	46	.08	55719	97.95	790	9	.02	56720	99.71
701	214	.38	50899	89.48	746	50	.09	55769	98.04	791	8	.01	56728	99.72
702	162	.28	51061	89.76	747	49	.09	55818	98.12	792	5	.01	56733	99.73
703	195	.34	51256	90.10	748	39	.07	55857	98.19	793	5	.01	56738	99.74
704	178	.31	51434	90.42	749	46	.08	55903	98.27	794	4	.01	56742	99.75
705	183	.32	51617	90.74	750	56	.10	55959	98.37	795	4	.01	56746	99.75
706	166	.29	51783	91.03	751	34	.06	55993	98.43	796	4	.01	56750	99.76
707	164	.29	51947	91.32	752	38	.07	56031	98.50	797	2	.00	56752	99.76
708	168	.30	52115	91.61	753	41	.07	56072	98.57	798	5	.01	56757	99.77
709	179	.31	52294	91.93	754	40	.07	56112	98.64	799	2	.00	56759	99.78
710	159	.28	52453	92.21	755	29	.05	56141	98.69	800	7	.01	56766	99.79
711	165	.29	52618	92.50	756	39	.07	56180	98.76	801	7	.01	56773	99.80
712	137	.24	52755	92.74	757	30	.05	56210	98.81	802	3	.01	56776	99.81
713	137	.24	52892	92.98	758	22	.04	56232	98.85	803	6	.01	56782	99.82
714	134	.24	53026	93.21	759	30	.05	56262	98.90	804	6	.01	56788	99.83
715	131	.23	53157	93.44	760	19	.03	56281	98.94	805	5	.01	56793	99.84
716	133	.23	53290	93.68	761	31	.05	56312	98.99	806	2	.00	56795	99.84
717	110	.19	53400	93.87	762	21	.04	56333	99.03	807	2	.00	56797	99.84
718	134	.24	53534	94.11	763	24	.04	56357	99.07	808	7	.01	56804	99.86
719	103	.18	53637	94.29	764	21	.04	56378	99.11	809	4	.01	56808	99.86
720	127	.22	53764	94.51	765	16	.03	56394	99.14	810	4	.01	56812	99.87
721	136	.24	53900	94.75	766	14	.02	56408	99.16	811	4	.01	56816	99.88
722	95	.17	53995	94.92	767	19	.03	56427	99.19	812	3	.01	56819	99.88
723	118	.21	54113	95.13	768	12	.02	56439	99.21	813	3	.01	56822	99.89
724	107	.19	54220	95.31	769	16	.03	56455	99.24	814	1	.00	56823	99.89
725	117	.21	54337	95.52	770	19	.03	56474	99.28	815	4	.01	56827	99.90
726	92	.16	54429	95.68	771	20	.04	56494	99.31	816	4	.01	56831	99.90
727	73	.13	54502	95.81	772	21	.04	56515	99.35	817	1	.00	56832	99.91
728	91	.16	54593	95.97	773	11	.02	56526	99.37	818	4	.01	56836	99.91
729	83	.15	54676	96.12	774	19	.03	56545	99.40	819	1	.00	56837	99.91
730	88	.15	54764	96.27	775	20	.04	56565	99.44	820	3	.01	56840	99.92
731	62	.11	54826	96.38	776	15	.03	56580	99.46	821	3	.01	56843	99.92

Appendix 12. Reading 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
822	2	.00	56845	99.93	837	4	.01	56863	99.96	861	1	.00	56874	99.98
825	3	.01	56848	99.93	839	2	.00	56865	99.96	864	1	.00	56875	99.98
827	3	.01	56851	99.94	840	2	.00	56867	99.97	873	2	.00	56877	99.98
829	1	.00	56852	99.94	841	1	.00	56868	99.97	880	4	.01	56881	99.99
830	2	.00	56854	99.94	842	2	.00	56870	99.97	915	1	.00	56882	99.99
832	2	.00	56856	99.95	851	1	.00	56871	99.97	970	4	.01	56886	100.00
833	1	.00	56857	99.95	855	1	.00	56872	99.98					
834	2	.00	56859	99.95	859	1	.00	56873	99.98					

Figure 12. Reading 6 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 13. Writing 6 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
230	7	.01	7	0.01	319	2	.00	80	0.14	364	16	.03	346	0.61
231	1	.00	8	0.01	320	2	.00	82	0.14	365	10	.02	356	0.63
245	1	.00	9	0.02	321	1	.00	83	0.15	366	20	.04	376	0.66
257	1	.00	10	0.02	322	4	.01	87	0.15	367	14	.02	390	0.69
259	1	.00	11	0.02	324	2	.00	89	0.16	368	21	.04	411	0.72
260	1	.00	12	0.02	325	2	.00	91	0.16	369	23	.04	434	0.76
263	1	.00	13	0.02	326	3	.01	94	0.17	370	12	.02	446	0.79
270	1	.00	14	0.02	327	3	.01	97	0.17	371	18	.03	464	0.82
272	2	.00	16	0.03	328	4	.01	101	0.18	372	17	.03	481	0.85
275	3	.01	19	0.03	329	4	.01	105	0.19	373	15	.03	496	0.87
276	1	.00	20	0.04	330	2	.00	107	0.19	374	23	.04	519	0.91
278	1	.00	21	0.04	331	3	.01	110	0.19	375	13	.02	532	0.94
280	1	.00	22	0.04	332	6	.01	116	0.20	376	25	.04	557	0.98
281	2	.00	24	0.04	333	3	.01	119	0.21	377	21	.04	578	1.02
282	1	.00	25	0.04	334	1	.00	120	0.21	378	21	.04	599	1.06
285	1	.00	26	0.05	335	4	.01	124	0.22	379	35	.06	634	1.12
287	3	.01	29	0.05	336	3	.01	127	0.22	380	30	.05	664	1.17
288	2	.00	31	0.05	337	2	.00	129	0.23	381	29	.05	693	1.22
289	2	.00	33	0.06	338	4	.01	133	0.23	382	20	.04	713	1.26
290	2	.00	35	0.06	339	4	.01	137	0.24	383	34	.06	747	1.32
291	1	.00	36	0.06	340	4	.01	141	0.25	384	32	.06	779	1.37
292	1	.00	37	0.07	341	5	.01	146	0.26	385	29	.05	808	1.42
294	1	.00	38	0.07	342	11	.02	157	0.28	386	31	.05	839	1.48
295	2	.00	40	0.07	343	8	.01	165	0.29	387	25	.04	864	1.52
296	3	.01	43	0.08	344	8	.01	173	0.30	388	32	.06	896	1.58
297	3	.01	46	0.08	345	7	.01	180	0.32	389	37	.07	933	1.64
299	2	.00	48	0.08	346	4	.01	184	0.32	390	37	.07	970	1.71
301	1	.00	49	0.09	347	5	.01	189	0.33	391	45	.08	1015	1.79
302	3	.01	52	0.09	348	10	.02	199	0.35	392	40	.07	1055	1.86
303	1	.00	53	0.09	349	6	.01	205	0.36	393	45	.08	1100	1.94
304	1	.00	54	0.10	350	11	.02	216	0.38	394	43	.08	1143	2.01
305	1	.00	55	0.10	351	7	.01	223	0.39	395	41	.07	1184	2.09
306	1	.00	56	0.10	352	11	.02	234	0.41	396	29	.05	1213	2.14
307	4	.01	60	0.11	353	10	.02	244	0.43	397	48	.08	1261	2.22
308	1	.00	61	0.11	354	10	.02	254	0.45	398	46	.08	1307	2.30
309	2	.00	63	0.11	355	8	.01	262	0.46	399	56	.10	1363	2.40
310	1	.00	64	0.11	356	7	.01	269	0.47	400	59	.10	1422	2.51
311	1	.00	65	0.11	357	3	.01	272	0.48	401	60	.11	1482	2.61
312	2	.00	67	0.12	358	7	.01	279	0.49	402	56	.10	1538	2.71
313	2	.00	69	0.12	359	11	.02	290	0.51	403	50	.09	1588	2.80
314	3	.01	72	0.13	360	12	.02	302	0.53	404	56	.10	1644	2.90
315	2	.00	74	0.13	361	8	.01	310	0.55	405	53	.09	1697	2.99
317	3	.01	77	0.14	362	10	.02	320	0.56	406	69	.12	1766	3.11
318	1	.00	78	0.14	363	10	.02	330	0.58	407	69	.12	1835	3.23

Appendix 13. Writing 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
408	65	.11	1900	3.35	453	176	.31	7400	13.04	498	320	.56	19389	34.17
409	66	.12	1966	3.46	454	168	.30	7568	13.34	499	330	.58	19719	34.75
410	73	.13	2039	3.59	455	202	.36	7770	13.69	500	355	.63	20074	35.38
411	70	.12	2109	3.72	456	208	.37	7978	14.06	501	341	.60	20415	35.98
412	72	.13	2181	3.84	457	211	.37	8189	14.43	502	315	.56	20730	36.53
413	53	.09	2234	3.94	458	194	.34	8383	14.77	503	346	.61	21076	37.14
414	94	.17	2328	4.10	459	217	.38	8600	15.16	504	351	.62	21427	37.76
415	93	.16	2421	4.27	460	212	.37	8812	15.53	505	367	.65	21794	38.41
416	90	.16	2511	4.43	461	217	.38	9029	15.91	506	339	.60	22133	39.01
417	82	.14	2593	4.57	462	233	.41	9262	16.32	507	356	.63	22489	39.63
418	94	.17	2687	4.74	463	212	.37	9474	16.70	508	343	.60	22832	40.24
419	81	.14	2768	4.88	464	251	.44	9725	17.14	509	332	.59	23164	40.82
420	87	.15	2855	5.03	465	205	.36	9930	17.50	510	376	.66	23540	41.48
421	92	.16	2947	5.19	466	253	.45	10183	17.95	511	363	.64	23903	42.12
422	110	.19	3057	5.39	467	231	.41	10414	18.35	512	345	.61	24248	42.73
423	93	.16	3150	5.55	468	251	.44	10665	18.79	513	352	.62	24600	43.35
424	108	.19	3258	5.74	469	249	.44	10914	19.23	514	370	.65	24970	44.00
425	98	.17	3356	5.91	470	238	.42	11152	19.65	515	369	.65	25339	44.65
426	115	.20	3471	6.12	471	260	.46	11412	20.11	516	366	.65	25705	45.30
427	105	.19	3576	6.30	472	250	.44	11662	20.55	517	369	.65	26074	45.95
428	108	.19	3684	6.49	473	264	.47	11926	21.02	518	375	.66	26449	46.61
429	110	.19	3794	6.69	474	266	.47	12192	21.49	519	391	.69	26840	47.30
430	130	.23	3924	6.92	475	260	.46	12452	21.94	520	406	.72	27246	48.02
431	116	.20	4040	7.12	476	276	.49	12728	22.43	521	376	.66	27622	48.68
432	117	.21	4157	7.33	477	265	.47	12993	22.90	522	394	.69	28016	49.37
433	121	.21	4278	7.54	478	255	.45	13248	23.35	523	372	.66	28388	50.03
434	141	.25	4419	7.79	479	275	.48	13523	23.83	524	374	.66	28762	50.69
435	143	.25	4562	8.04	480	264	.47	13787	24.30	525	388	.68	29150	51.37
436	143	.25	4705	8.29	481	284	.50	14071	24.80	526	411	.72	29561	52.10
437	126	.22	4831	8.51	482	272	.48	14343	25.28	527	384	.68	29945	52.77
438	126	.22	4957	8.74	483	275	.48	14618	25.76	528	362	.64	30307	53.41
439	136	.24	5093	8.98	484	290	.51	14908	26.27	529	367	.65	30674	54.06
440	141	.25	5234	9.22	485	283	.50	15191	26.77	530	358	.63	31032	54.69
441	149	.26	5383	9.49	486	315	.56	15506	27.33	531	371	.65	31403	55.34
442	145	.26	5528	9.74	487	289	.51	15795	27.84	532	358	.63	31761	55.97
443	134	.24	5662	9.98	488	300	.53	16095	28.36	533	367	.65	32128	56.62
444	208	.37	5870	10.34	489	354	.62	16449	28.99	534	372	.66	32500	57.27
445	166	.29	6036	10.64	490	285	.50	16734	29.49	535	396	.70	32896	57.97
446	169	.30	6205	10.94	491	340	.60	17074	30.09	536	422	.74	33318	58.72
447	164	.29	6369	11.22	492	341	.60	17415	30.69	537	369	.65	33687	59.37
448	183	.32	6552	11.55	493	347	.61	17762	31.30	538	387	.68	34074	60.05
449	149	.26	6701	11.81	494	326	.57	18088	31.88	539	342	.60	34416	60.65
450	179	.32	6880	12.12	495	316	.56	18404	32.43	540	364	.64	34780	61.29
451	173	.30	7053	12.43	496	322	.57	18726	33.00	541	374	.66	35154	61.95
452	171	.30	7224	12.73	497	343	.60	19069	33.61	542	354	.62	35508	62.58

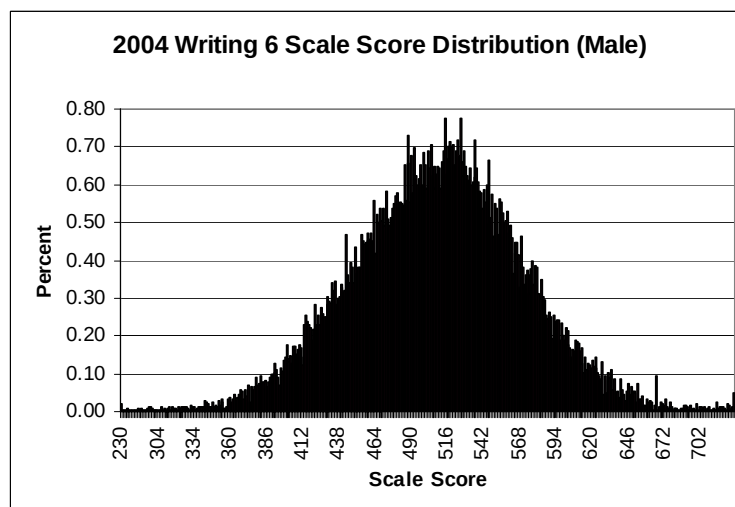
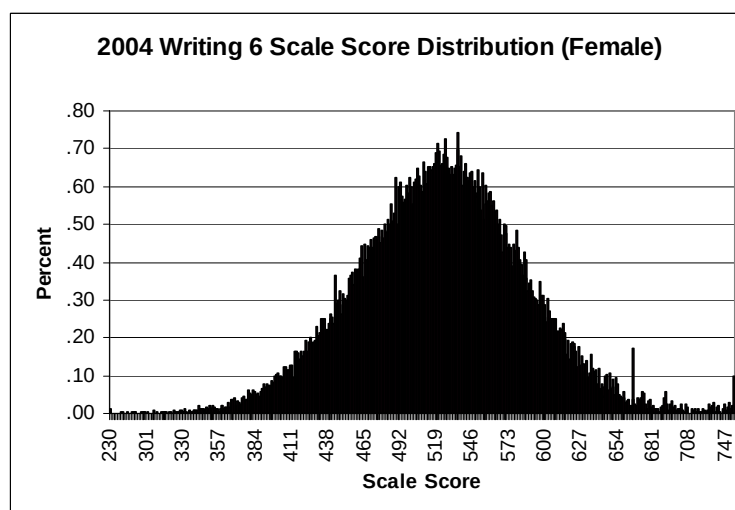
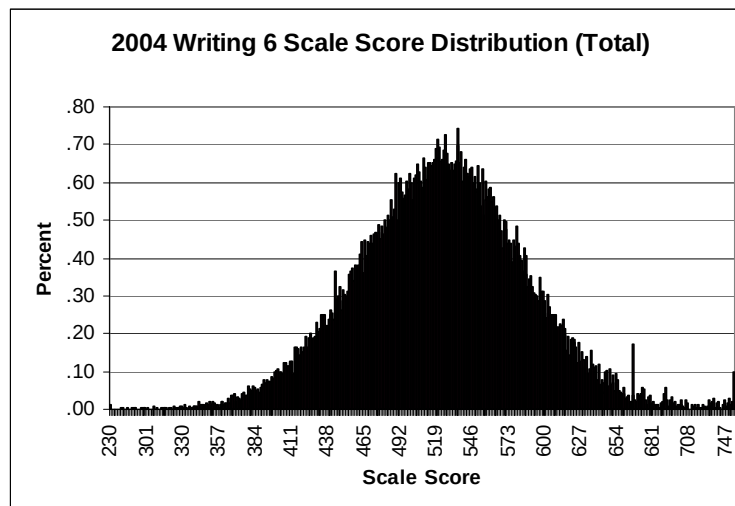
Appendix 13. Writing 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
543	353	.62	35861	63.20	588	184	.32	48760	85.93	633	54	.10	54511	96.06
544	349	.62	36210	63.81	589	196	.35	48956	86.28	634	61	.11	54572	96.17
545	361	.64	36571	64.45	590	200	.35	49156	86.63	635	89	.16	54661	96.33
546	364	.64	36935	65.09	591	183	.32	49339	86.95	636	68	.12	54729	96.45
547	339	.60	37274	65.69	592	175	.31	49514	87.26	637	63	.11	54792	96.56
548	349	.62	37623	66.30	593	167	.29	49681	87.55	638	57	.10	54849	96.66
549	331	.58	37954	66.89	594	172	.30	49853	87.86	639	66	.12	54915	96.78
550	326	.57	38280	67.46	595	171	.30	50024	88.16	640	44	.08	54959	96.85
551	365	.64	38645	68.10	596	164	.29	50188	88.45	641	68	.12	55027	96.97
552	340	.60	38985	68.70	597	197	.35	50385	88.79	642	38	.07	55065	97.04
553	304	.54	39289	69.24	598	177	.31	50562	89.11	643	45	.08	55110	97.12
554	361	.64	39650	69.88	599	178	.31	50740	89.42	644	39	.07	55149	97.19
555	291	.51	39941	70.39	600	164	.29	50904	89.71	645	26	.05	55175	97.23
556	342	.60	40283	70.99	601	145	.26	51049	89.96	646	57	.10	55232	97.34
557	314	.55	40597	71.54	602	138	.24	51187	90.21	647	58	.10	55290	97.44
558	318	.56	40915	72.10	603	173	.30	51360	90.51	648	35	.06	55325	97.50
559	331	.58	41246	72.69	604	154	.27	51514	90.78	649	60	.11	55385	97.61
560	334	.59	41580	73.28	605	141	.25	51655	91.03	650	37	.07	55422	97.67
561	312	.55	41892	73.83	606	142	.25	51797	91.28	651	51	.09	55473	97.76
562	319	.56	42211	74.39	607	142	.25	51939	91.53	652	40	.07	55513	97.83
563	302	.53	42513	74.92	608	114	.20	52053	91.73	653	27	.05	55540	97.88
564	257	.45	42770	75.37	609	143	.25	52196	91.99	654	54	.10	55594	97.97
565	306	.54	43076	75.91	610	123	.22	52319	92.20	655	44	.08	55638	98.05
566	284	.50	43360	76.41	611	123	.22	52442	92.42	656	28	.05	55666	98.10
567	292	.51	43652	76.93	612	127	.22	52569	92.64	657	26	.05	55692	98.15
568	267	.47	43919	77.40	613	126	.22	52695	92.86	658	23	.04	55715	98.19
569	242	.43	44161	77.82	614	134	.24	52829	93.10	659	24	.04	55739	98.23
570	284	.50	44445	78.33	615	121	.21	52950	93.31	660	33	.06	55772	98.29
571	282	.50	44727	78.82	616	112	.20	53062	93.51	661	17	.03	55789	98.32
572	271	.48	44998	79.30	617	89	.16	53151	93.67	662	19	.03	55808	98.35
573	250	.44	45248	79.74	618	109	.19	53260	93.86	663	20	.04	55828	98.39
574	254	.45	45502	80.19	619	82	.14	53342	94.00	664	12	.02	55840	98.41
575	250	.44	45752	80.63	620	105	.19	53447	94.19	665	11	.02	55851	98.43
576	222	.39	45974	81.02	621	106	.19	53553	94.38	666	21	.04	55872	98.46
577	253	.45	46227	81.47	622	104	.18	53657	94.56	667	97	.17	55969	98.63
578	245	.43	46472	81.90	623	100	.18	53757	94.74	668	13	.02	55982	98.66
579	243	.43	46715	82.33	624	93	.16	53850	94.90	669	11	.02	55993	98.68
580	275	.48	46990	82.81	625	70	.12	53920	95.02	670	24	.04	56017	98.72
581	249	.44	47239	83.25	626	100	.18	54020	95.20	671	22	.04	56039	98.76
582	231	.41	47470	83.66	627	73	.13	54093	95.33	672	23	.04	56062	98.80
583	223	.39	47693	84.05	628	87	.15	54180	95.48	673	14	.02	56076	98.82
584	208	.37	47901	84.42	629	60	.11	54240	95.59	674	33	.06	56109	98.88
585	242	.43	48143	84.84	630	74	.13	54314	95.72	675	30	.05	56139	98.93
586	230	.41	48373	85.25	631	63	.11	54377	95.83	676	15	.03	56154	98.96
587	203	.36	48576	85.61	632	80	.14	54457	95.97	677	7	.01	56161	98.97

Appendix 13. Writing 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
678	19	.03	56180	99.01	700	7	.01	56424	99.44	723	4	.01	56535	99.63
679	22	.04	56202	99.04	701	7	.01	56431	99.45	726	13	.02	56548	99.65
680	10	.02	56212	99.06	702	7	.01	56438	99.46	727	10	.02	56558	99.67
681	8	.01	56220	99.08	703	15	.03	56453	99.49	728	5	.01	56563	99.68
682	11	.02	56231	99.10	704	5	.01	56458	99.50	729	11	.02	56574	99.70
683	6	.01	56237	99.11	705	2	.00	56460	99.50	730	17	.03	56591	99.73
684	6	.01	56243	99.12	706	13	.02	56473	99.52	731	2	.00	56593	99.73
685	6	.01	56249	99.13	707	10	.02	56483	99.54	733	9	.02	56602	99.75
686	3	.01	56252	99.13	708	1	.00	56484	99.54	736	12	.02	56614	99.77
687	9	.02	56261	99.15	709	1	.00	56485	99.54	737	3	.01	56617	99.78
688	10	.02	56271	99.17	710	6	.01	56491	99.55	738	1	.00	56618	99.78
689	11	.02	56282	99.19	711	1	.00	56492	99.56	739	1	.00	56619	99.78
690	23	.04	56305	99.23	712	5	.01	56497	99.56	741	8	.01	56627	99.79
691	32	.06	56337	99.28	713	7	.01	56504	99.58	747	13	.02	56640	99.82
692	13	.02	56350	99.31	714	2	.00	56506	99.58	749	4	.01	56644	99.82
693	4	.01	56354	99.31	715	6	.01	56512	99.59	750	10	.02	56654	99.84
694	13	.02	56367	99.34	716	3	.01	56515	99.60	752	16	.03	56670	99.87
695	7	.01	56374	99.35	717	2	.00	56517	99.60	756	7	.01	56677	99.88
696	18	.03	56392	99.38	718	1	.00	56518	99.60	764	1	.00	56678	99.88
697	9	.02	56401	99.40	719	7	.01	56525	99.61	782	11	.02	56689	99.90
698	12	.02	56413	99.42	720	4	.01	56529	99.62	840	55	.10	56744	100.00
699	4	.01	56417	99.42	721	2	.00	56531	99.62					

Figure 13. Writing 6 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 14. Mathematics 6 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
240	170	.30	170	0.30	284	7	.01	346	0.61	328	11	.02	841	1.47
241	5	.01	175	0.31	285	7	.01	353	0.62	329	25	.04	866	1.52
242	2	.00	177	0.31	286	12	.02	365	0.64	330	15	.03	881	1.54
243	5	.01	182	0.32	287	8	.01	373	0.65	331	19	.03	900	1.58
244	2	.00	184	0.32	288	5	.01	378	0.66	332	15	.03	915	1.60
245	2	.00	186	0.33	289	11	.02	389	0.68	333	23	.04	938	1.64
246	2	.00	188	0.33	290	5	.01	394	0.69	334	21	.04	959	1.68
247	1	.00	189	0.33	291	2	.00	396	0.69	335	9	.02	968	1.70
248	3	.01	192	0.34	292	6	.01	402	0.70	336	17	.03	985	1.73
249	1	.00	193	0.34	293	8	.01	410	0.72	337	17	.03	1002	1.76
250	3	.01	196	0.34	294	8	.01	418	0.73	338	10	.02	1012	1.77
251	2	.00	198	0.35	295	15	.03	433	0.76	339	22	.04	1034	1.81
252	3	.01	201	0.35	296	10	.02	443	0.78	340	24	.04	1058	1.85
253	2	.00	203	0.36	297	11	.02	454	0.80	341	22	.04	1080	1.89
254	4	.01	207	0.36	298	13	.02	467	0.82	342	17	.03	1097	1.92
255	2	.00	209	0.37	299	11	.02	478	0.84	343	23	.04	1120	1.96
256	5	.01	214	0.38	300	16	.03	494	0.87	344	25	.04	1145	2.01
257	4	.01	218	0.38	301	6	.01	500	0.88	345	20	.04	1165	2.04
258	3	.01	221	0.39	302	5	.01	505	0.89	346	37	.06	1202	2.11
259	4	.01	225	0.39	303	12	.02	517	0.91	347	30	.05	1232	2.16
260	6	.01	231	0.40	304	8	.01	525	0.92	348	30	.05	1262	2.21
261	5	.01	236	0.41	305	12	.02	537	0.94	349	24	.04	1286	2.25
262	4	.01	240	0.42	306	9	.02	546	0.96	350	23	.04	1309	2.29
263	4	.01	244	0.43	307	14	.02	560	0.98	351	30	.05	1339	2.35
264	7	.01	251	0.44	308	10	.02	570	1.00	352	36	.06	1375	2.41
265	1	.00	252	0.44	309	9	.02	579	1.01	353	30	.05	1405	2.46
266	5	.01	257	0.45	310	13	.02	592	1.04	354	24	.04	1429	2.50
267	6	.01	263	0.46	311	11	.02	603	1.06	355	26	.05	1455	2.55
268	4	.01	267	0.47	312	20	.04	623	1.09	356	33	.06	1488	2.61
269	4	.01	271	0.47	313	17	.03	640	1.12	357	39	.07	1527	2.68
270	3	.01	274	0.48	314	16	.03	656	1.15	358	34	.06	1561	2.74
271	3	.01	277	0.49	315	12	.02	668	1.17	359	33	.06	1594	2.79
272	3	.01	280	0.49	316	8	.01	676	1.18	360	32	.06	1626	2.85
273	4	.01	284	0.50	317	20	.04	696	1.22	361	43	.08	1669	2.93
274	8	.01	292	0.51	318	7	.01	703	1.23	362	38	.07	1707	2.99
275	1	.00	293	0.51	319	12	.02	715	1.25	363	41	.07	1748	3.06
276	5	.01	298	0.52	320	13	.02	728	1.28	364	38	.07	1786	3.13
277	2	.00	300	0.53	321	10	.02	738	1.29	365	30	.05	1816	3.18
278	6	.01	306	0.54	322	9	.02	747	1.31	366	36	.06	1852	3.25
279	4	.01	310	0.54	323	19	.03	766	1.34	367	27	.05	1879	3.29
280	3	.01	313	0.55	324	16	.03	782	1.37	368	37	.06	1916	3.36
281	10	.02	323	0.57	325	17	.03	799	1.40	369	42	.07	1958	3.43
282	11	.02	334	0.59	326	14	.02	813	1.42	370	46	.08	2004	3.51
283	5	.01	339	0.59	327	17	.03	830	1.45	371	39	.07	2043	3.58

Appendix 14. Mathematics 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
372	35	.06	2078	3.64	417	95	.17	4999	8.76	462	188	.33	11381	19.95
373	25	.04	2103	3.69	418	84	.15	5083	8.91	463	190	.33	11571	20.28
374	39	.07	2142	3.75	419	110	.19	5193	9.10	464	185	.32	11756	20.61
375	31	.05	2173	3.81	420	96	.17	5289	9.27	465	182	.32	11938	20.92
376	45	.08	2218	3.89	421	113	.20	5402	9.47	466	200	.35	12138	21.27
377	50	.09	2268	3.98	422	109	.19	5511	9.66	467	188	.33	12326	21.60
378	51	.09	2319	4.06	423	113	.20	5624	9.86	468	192	.34	12518	21.94
379	41	.07	2360	4.14	424	114	.20	5738	10.06	469	218	.38	12736	22.32
380	52	.09	2412	4.23	425	108	.19	5846	10.25	470	210	.37	12946	22.69
381	57	.10	2469	4.33	426	106	.19	5952	10.43	471	221	.39	13167	23.08
382	43	.08	2512	4.40	427	117	.21	6069	10.64	472	208	.36	13375	23.44
383	57	.10	2569	4.50	428	115	.20	6184	10.84	473	225	.39	13600	23.84
384	67	.12	2636	4.62	429	123	.22	6307	11.05	474	212	.37	13812	24.21
385	52	.09	2688	4.71	430	130	.23	6437	11.28	475	208	.36	14020	24.57
386	52	.09	2740	4.80	431	118	.21	6555	11.49	476	227	.40	14247	24.97
387	61	.11	2801	4.91	432	110	.19	6665	11.68	477	257	.45	14504	25.42
388	56	.10	2857	5.01	433	117	.21	6782	11.89	478	224	.39	14728	25.81
389	54	.09	2911	5.10	434	123	.22	6905	12.10	479	228	.40	14956	26.21
390	65	.11	2976	5.22	435	113	.20	7018	12.30	480	243	.43	15199	26.64
391	54	.09	3030	5.31	436	125	.22	7143	12.52	481	218	.38	15417	27.02
392	62	.11	3092	5.42	437	153	.27	7296	12.79	482	239	.42	15656	27.44
393	61	.11	3153	5.53	438	132	.23	7428	13.02	483	221	.39	15877	27.83
394	69	.12	3222	5.65	439	145	.25	7573	13.27	484	244	.43	16121	28.26
395	55	.10	3277	5.74	440	127	.22	7700	13.50	485	254	.45	16375	28.70
396	62	.11	3339	5.85	441	133	.23	7833	13.73	486	246	.43	16621	29.13
397	59	.10	3398	5.96	442	143	.25	7976	13.98	487	233	.41	16854	29.54
398	60	.11	3458	6.06	443	156	.27	8132	14.25	488	264	.46	17118	30.00
399	60	.11	3518	6.17	444	162	.28	8294	14.54	489	244	.43	17362	30.43
400	73	.13	3591	6.29	445	148	.26	8442	14.80	490	249	.44	17611	30.87
401	82	.14	3673	6.44	446	145	.25	8587	15.05	491	252	.44	17863	31.31
402	68	.12	3741	6.56	447	159	.28	8746	15.33	492	273	.48	18136	31.79
403	91	.16	3832	6.72	448	166	.29	8912	15.62	493	240	.42	18376	32.21
404	72	.13	3904	6.84	449	178	.31	9090	15.93	494	253	.44	18629	32.65
405	79	.14	3983	6.98	450	162	.28	9252	16.22	495	279	.49	18908	33.14
406	66	.12	4049	7.10	451	164	.29	9416	16.50	496	276	.48	19184	33.62
407	80	.14	4129	7.24	452	170	.30	9586	16.80	497	294	.52	19478	34.14
408	80	.14	4209	7.38	453	161	.28	9747	17.08	498	316	.55	19794	34.69
409	77	.13	4286	7.51	454	194	.34	9941	17.42	499	285	.50	20079	35.19
410	88	.15	4374	7.67	455	161	.28	10102	17.71	500	281	.49	20360	35.69
411	91	.16	4465	7.83	456	194	.34	10296	18.05	501	304	.53	20664	36.22
412	88	.15	4553	7.98	457	169	.30	10465	18.34	502	319	.56	20983	36.78
413	80	.14	4633	8.12	458	190	.33	10655	18.68	503	283	.50	21266	37.27
414	93	.16	4726	8.28	459	191	.33	10846	19.01	504	304	.53	21570	37.81
415	92	.16	4818	8.44	460	171	.30	11017	19.31	505	285	.50	21855	38.31
416	86	.15	4904	8.60	461	176	.31	11193	19.62	506	302	.53	22157	38.84

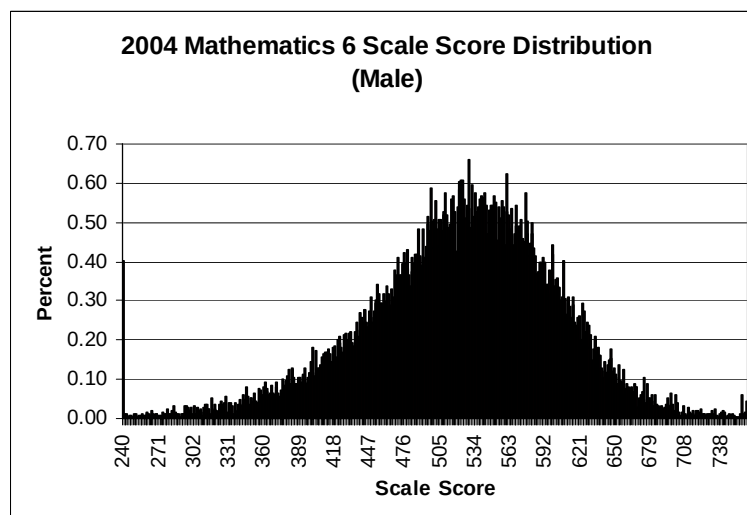
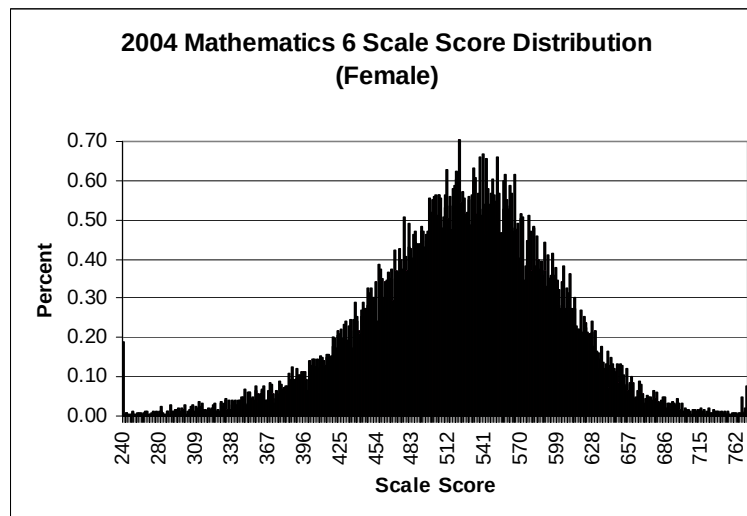
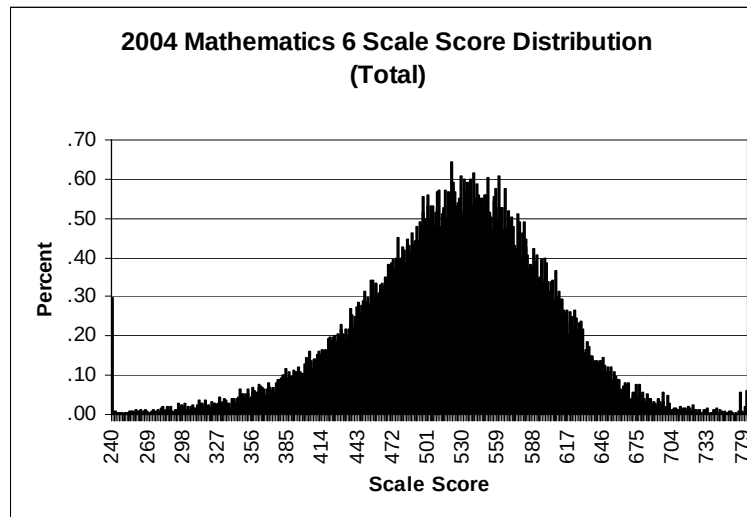
Appendix 14. Mathematics 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
507	273	.48	22430	39.31	552	294	.52	36547	64.06	597	192	.34	48221	84.52
508	293	.51	22723	39.83	553	291	.51	36838	64.57	598	228	.40	48449	84.92
509	301	.53	23024	40.35	554	287	.50	37125	65.07	599	220	.39	48669	85.30
510	324	.57	23348	40.92	555	268	.47	37393	65.54	600	195	.34	48864	85.65
511	326	.57	23674	41.49	556	317	.56	37710	66.10	601	193	.34	49057	85.98
512	273	.48	23947	41.97	557	309	.54	38019	66.64	602	180	.32	49237	86.30
513	292	.51	24239	42.48	558	329	.58	38348	67.21	603	192	.34	49429	86.64
514	300	.53	24539	43.01	559	283	.50	38631	67.71	604	176	.31	49605	86.94
515	296	.52	24835	43.53	560	300	.53	38931	68.24	605	195	.34	49800	87.29
516	327	.57	25162	44.10	561	346	.61	39277	68.84	606	166	.29	49966	87.58
517	285	.50	25447	44.60	562	301	.53	39578	69.37	607	208	.36	50174	87.94
518	323	.57	25770	45.17	563	300	.53	39878	69.90	608	167	.29	50341	88.23
519	298	.52	26068	45.69	564	268	.47	40146	70.36	609	170	.30	50511	88.53
520	319	.56	26387	46.25	565	328	.57	40474	70.94	610	178	.31	50689	88.84
521	367	.64	26754	46.89	566	263	.46	40737	71.40	611	167	.29	50856	89.14
522	328	.57	27082	47.47	567	270	.47	41007	71.87	612	151	.26	51007	89.40
523	337	.59	27419	48.06	568	295	.52	41302	72.39	613	167	.29	51174	89.69
524	324	.57	27743	48.63	569	255	.45	41557	72.84	614	152	.27	51326	89.96
525	302	.53	28045	49.16	570	280	.49	41837	73.33	615	148	.26	51474	90.22
526	307	.54	28352	49.69	571	287	.50	42124	73.83	616	152	.27	51626	90.49
527	294	.52	28646	50.21	572	273	.48	42397	74.31	617	133	.23	51759	90.72
528	314	.55	28960	50.76	573	245	.43	42642	74.74	618	118	.21	51877	90.93
529	346	.61	29306	51.37	574	240	.42	42882	75.16	619	150	.26	52027	91.19
530	292	.51	29598	51.88	575	240	.42	43122	75.58	620	136	.24	52163	91.43
531	299	.52	29897	52.40	576	292	.51	43414	76.09	621	142	.25	52305	91.68
532	341	.60	30238	53.00	577	280	.49	43694	76.58	622	121	.21	52426	91.89
533	326	.57	30564	53.57	578	277	.49	43971	77.07	623	152	.27	52578	92.15
534	337	.59	30901	54.16	579	224	.39	44195	77.46	624	140	.25	52718	92.40
535	285	.50	31186	54.66	580	265	.46	44460	77.93	625	118	.21	52836	92.61
536	311	.55	31497	55.21	581	279	.49	44739	78.42	626	122	.21	52958	92.82
537	341	.60	31838	55.80	582	244	.43	44983	78.84	627	132	.23	53090	93.05
538	295	.52	32133	56.32	583	255	.45	45238	79.29	628	136	.24	53226	93.29
539	306	.54	32439	56.86	584	232	.41	45470	79.70	629	103	.18	53329	93.47
540	352	.62	32791	57.47	585	212	.37	45682	80.07	630	123	.22	53452	93.69
541	315	.55	33106	58.03	586	205	.36	45887	80.43	631	89	.16	53541	93.84
542	336	.59	33442	58.61	587	219	.38	46106	80.81	632	93	.16	53634	94.01
543	297	.52	33739	59.14	588	216	.38	46322	81.19	633	106	.19	53740	94.19
544	320	.56	34059	59.70	589	240	.42	46562	81.61	634	92	.16	53832	94.35
545	288	.50	34347	60.20	590	222	.39	46784	82.00	635	99	.17	53931	94.53
546	314	.55	34661	60.75	591	202	.35	46986	82.35	636	85	.15	54016	94.68
547	297	.52	34958	61.27	592	231	.40	47217	82.76	637	85	.15	54101	94.82
548	318	.56	35276	61.83	593	198	.35	47415	83.11	638	81	.14	54182	94.97
549	315	.55	35591	62.38	594	199	.35	47614	83.45	639	75	.13	54257	95.10
550	318	.56	35909	62.94	595	189	.33	47803	83.79	640	77	.13	54334	95.23
551	344	.60	36253	63.54	596	226	.40	48029	84.18	641	78	.14	54412	95.37

Appendix 14. Mathematics 6 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
642	55	.10	54467	95.47	685	24	.04	56376	98.81	728	2	.00	56859	99.66
643	76	.13	54543	95.60	686	23	.04	56399	98.85	729	1	.00	56860	99.66
644	77	.13	54620	95.73	687	14	.02	56413	98.88	730	4	.01	56864	99.67
645	77	.13	54697	95.87	688	18	.03	56431	98.91	731	6	.01	56870	99.68
646	74	.13	54771	96.00	689	12	.02	56443	98.93	732	6	.01	56876	99.69
647	83	.15	54854	96.14	690	16	.03	56459	98.96	733	10	.02	56886	99.71
648	72	.13	54926	96.27	691	12	.02	56471	98.98	734	1	.00	56887	99.71
649	61	.11	54987	96.38	692	20	.04	56491	99.01	735	2	.00	56889	99.71
650	70	.12	55057	96.50	693	22	.04	56513	99.05	736	1	.00	56890	99.71
651	53	.09	55110	96.59	694	19	.03	56532	99.09	737	3	.01	56893	99.72
652	62	.11	55172	96.70	695	17	.03	56549	99.11	738	6	.01	56899	99.73
653	69	.12	55241	96.82	696	31	.05	56580	99.17	740	1	.00	56900	99.73
654	47	.08	55288	96.90	697	19	.03	56599	99.20	741	7	.01	56907	99.74
655	51	.09	55339	96.99	698	7	.01	56606	99.21	743	9	.02	56916	99.76
656	61	.11	55400	97.10	699	11	.02	56617	99.23	744	1	.00	56917	99.76
657	54	.09	55454	97.20	700	27	.05	56644	99.28	745	6	.01	56923	99.77
658	41	.07	55495	97.27	701	15	.03	56659	99.31	746	3	.01	56926	99.78
659	50	.09	55545	97.36	702	12	.02	56671	99.33	748	5	.01	56931	99.78
660	50	.09	55595	97.44	703	7	.01	56678	99.34	750	1	.00	56932	99.79
661	37	.06	55632	97.51	704	6	.01	56684	99.35	752	4	.01	56936	99.79
662	34	.06	55666	97.57	705	9	.02	56693	99.37	753	2	.00	56938	99.80
663	32	.06	55698	97.62	706	7	.01	56700	99.38	755	3	.01	56941	99.80
664	42	.07	55740	97.70	707	10	.02	56710	99.40	756	2	.00	56943	99.81
665	45	.08	55785	97.78	708	6	.01	56716	99.41	758	5	.01	56948	99.81
666	44	.08	55829	97.85	709	6	.01	56722	99.42	759	4	.01	56952	99.82
667	47	.08	55876	97.94	710	8	.01	56730	99.43	760	1	.00	56953	99.82
668	40	.07	55916	98.01	711	11	.02	56741	99.45	762	2	.00	56955	99.83
669	17	.03	55933	98.04	712	6	.01	56747	99.46	764	1	.00	56956	99.83
670	23	.04	55956	98.08	713	7	.01	56754	99.47	765	2	.00	56958	99.83
671	27	.05	55983	98.12	714	10	.02	56764	99.49	766	1	.00	56959	99.83
672	33	.06	56016	98.18	715	10	.02	56774	99.51	767	1	.00	56960	99.84
673	33	.06	56049	98.24	716	5	.01	56779	99.52	768	5	.01	56965	99.84
674	43	.08	56092	98.31	717	11	.02	56790	99.54	772	1	.00	56966	99.85
675	22	.04	56114	98.35	718	9	.02	56799	99.55	775	32	.06	56998	99.90
676	25	.04	56139	98.40	719	6	.01	56805	99.56	779	5	.01	57003	99.91
677	44	.08	56183	98.47	720	5	.01	56810	99.57	780	3	.01	57006	99.92
678	27	.05	56210	98.52	721	13	.02	56823	99.60	792	3	.01	57009	99.92
679	32	.06	56242	98.58	722	5	.01	56828	99.60	803	11	.02	57020	99.94
680	24	.04	56266	98.62	723	6	.01	56834	99.61	830	34	.06	57054	100.00
681	23	.04	56289	98.66	724	6	.01	56840	99.62					
682	18	.03	56307	98.69	725	2	.00	56842	99.63					
683	29	.05	56336	98.74	726	8	.01	56850	99.64					
684	16	.03	56352	98.77	727	7	.01	56857	99.65					

Figure 14. Mathematics 6 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 15. Reading 7 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
300	263	0.46	263	0.46	355	2	.00	357	0.63	400	5	.01	515	0.90
301	2	0.00	265	0.46	356	3	.01	360	0.63	401	10	.02	525	0.92
302	1	0.00	266	0.47	357	2	.00	362	0.64	402	5	.01	530	0.93
304	1	0.00	267	0.47	358	3	.01	365	0.64	403	1	.00	531	0.93
305	1	0.00	268	0.47	359	3	.01	368	0.65	404	6	.01	537	0.94
306	3	0.01	271	0.48	360	2	.00	370	0.65	405	8	.01	545	0.96
308	1	0.00	272	0.48	361	2	.00	372	0.65	406	3	.01	548	0.96
309	2	0.00	274	0.48	362	4	.01	376	0.66	407	5	.01	553	0.97
310	1	0.00	275	0.48	363	1	.00	377	0.66	408	4	.01	557	0.98
311	2	0.00	277	0.49	364	2	.00	379	0.66	409	6	.01	563	0.99
314	1	0.00	278	0.49	365	2	.00	381	0.67	410	7	.01	570	1.00
315	3	0.01	281	0.49	366	5	.01	386	0.68	411	5	.01	575	1.01
316	1	0.00	282	0.49	368	4	.01	390	0.68	412	3	.01	578	1.01
317	2	0.00	284	0.50	369	5	.01	395	0.69	413	4	.01	582	1.02
318	1	0.00	285	0.50	370	2	.00	397	0.70	414	8	.01	590	1.03
320	3	0.01	288	0.51	371	3	.01	400	0.70	415	7	.01	597	1.05
324	1	0.00	289	0.51	372	4	.01	404	0.71	416	2	.00	599	1.05
325	2	0.00	291	0.51	373	5	.01	409	0.72	417	8	.01	607	1.06
326	3	0.01	294	0.52	374	3	.01	412	0.72	418	11	.02	618	1.08
329	2	0.00	296	0.52	375	2	.00	414	0.73	419	8	.01	626	1.10
330	1	0.00	297	0.52	376	4	.01	418	0.73	420	5	.01	631	1.11
331	3	0.01	300	0.53	377	4	.01	422	0.74	421	7	.01	638	1.12
332	2	0.00	302	0.53	378	2	.00	424	0.74	422	7	.01	645	1.13
333	3	0.01	305	0.54	379	4	.01	428	0.75	423	3	.01	648	1.14
334	2	0.00	307	0.54	380	6	.01	434	0.76	424	10	.02	658	1.15
335	1	0.00	308	0.54	381	6	.01	440	0.77	425	4	.01	662	1.16
336	2	0.00	310	0.54	382	3	.01	443	0.78	426	11	.02	673	1.18
337	1	0.00	311	0.55	383	4	.01	447	0.78	427	6	.01	679	1.19
338	2	0.00	313	0.55	384	3	.01	450	0.79	428	15	.03	694	1.22
339	1	0.00	314	0.55	385	2	.00	452	0.79	429	12	.02	706	1.24
341	3	0.01	317	0.56	386	2	.00	454	0.80	430	10	.02	716	1.26
342	4	0.01	321	0.56	387	3	.01	457	0.80	431	9	.02	725	1.27
343	3	0.01	324	0.57	388	7	.01	464	0.81	432	11	.02	736	1.29
344	3	0.01	327	0.57	389	5	.01	469	0.82	433	10	.02	746	1.31
345	2	0.00	329	0.58	390	10	.02	479	0.84	434	8	.01	754	1.32
346	4	0.01	333	0.58	391	2	.00	481	0.84	435	16	.03	770	1.35
347	1	0.00	334	0.59	392	3	.01	484	0.85	436	8	.01	778	1.36
348	1	0.00	335	0.59	393	2	.00	486	0.85	437	14	.02	792	1.39
349	3	0.01	338	0.59	394	4	.01	490	0.86	438	11	.02	803	1.41
350	4	0.01	342	0.60	395	6	.01	496	0.87	439	10	.02	813	1.43
351	3	0.01	345	0.61	396	5	.01	501	0.88	440	8	.01	821	1.44
352	5	0.01	350	0.61	397	3	.01	504	0.88	441	11	.02	832	1.46
353	2	0.00	352	0.62	398	4	.01	508	0.89	442	18	.03	850	1.49
354	3	0.01	355	0.62	399	2	.00	510	0.89	443	16	.03	866	1.52

Appendix 15. Reading 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
444	13	.02	879	1.54	489	41	.07	1947	3.42	534	102	.18	4418	7.75
445	16	.03	895	1.57	490	34	.06	1981	3.48	535	98	.17	4516	7.92
446	12	.02	907	1.59	491	30	.05	2011	3.53	536	78	.14	4594	8.06
447	15	.03	922	1.62	492	42	.07	2053	3.60	537	82	.14	4676	8.20
448	10	.02	932	1.63	493	36	.06	2089	3.66	538	78	.14	4754	8.34
449	21	.04	953	1.67	494	45	.08	2134	3.74	539	113	.20	4867	8.54
450	20	.04	973	1.71	495	41	.07	2175	3.82	540	76	.13	4943	8.67
451	16	.03	989	1.73	496	40	.07	2215	3.89	541	76	.13	5019	8.80
452	11	.02	1000	1.75	497	49	.09	2264	3.97	542	100	.18	5119	8.98
453	14	.02	1014	1.78	498	36	.06	2300	4.03	543	81	.14	5200	9.12
454	14	.02	1028	1.80	499	40	.07	2340	4.10	544	97	.17	5297	9.29
455	18	.03	1046	1.83	500	43	.08	2383	4.18	545	91	.16	5388	9.45
456	14	.02	1060	1.86	501	32	.06	2415	4.24	546	96	.17	5484	9.62
457	13	.02	1073	1.88	502	46	.08	2461	4.32	547	118	.21	5602	9.83
458	20	.04	1093	1.92	503	45	.08	2506	4.40	548	108	.19	5710	10.02
459	18	.03	1111	1.95	504	42	.07	2548	4.47	549	116	.20	5826	10.22
460	21	.04	1132	1.99	505	55	.10	2603	4.57	550	118	.21	5944	10.43
461	19	.03	1151	2.02	506	43	.08	2646	4.64	551	97	.17	6041	10.60
462	19	.03	1170	2.05	507	54	.09	2700	4.74	552	126	.22	6167	10.82
463	21	.04	1191	2.09	508	49	.09	2749	4.82	553	120	.21	6287	11.03
464	21	.04	1212	2.13	509	48	.08	2797	4.91	554	125	.22	6412	11.25
465	33	.06	1245	2.18	510	41	.07	2838	4.98	555	119	.21	6531	11.46
466	14	.02	1259	2.21	511	42	.07	2880	5.05	556	96	.17	6627	11.62
467	18	.03	1277	2.24	512	45	.08	2925	5.13	557	136	.24	6763	11.86
468	21	.04	1298	2.28	513	59	.10	2984	5.23	558	119	.21	6882	12.07
469	26	.05	1324	2.32	514	64	.11	3048	5.35	559	131	.23	7013	12.30
470	26	.05	1350	2.37	515	55	.10	3103	5.44	560	135	.24	7148	12.54
471	36	.06	1386	2.43	516	59	.10	3162	5.55	561	154	.27	7302	12.81
472	27	.05	1413	2.48	517	58	.10	3220	5.65	562	121	.21	7423	13.02
473	34	.06	1447	2.54	518	67	.12	3287	5.77	563	121	.21	7544	13.23
474	26	.05	1473	2.58	519	62	.11	3349	5.87	564	161	.28	7705	13.52
475	25	.04	1498	2.63	520	46	.08	3395	5.96	565	147	.26	7852	13.77
476	30	.05	1528	2.68	521	81	.14	3476	6.10	566	158	.28	8010	14.05
477	35	.06	1563	2.74	522	59	.10	3535	6.20	567	168	.29	8178	14.35
478	29	.05	1592	2.79	523	67	.12	3602	6.32	568	184	.32	8362	14.67
479	24	.04	1616	2.83	524	69	.12	3671	6.44	569	180	.32	8542	14.98
480	27	.05	1643	2.88	525	75	.13	3746	6.57	570	157	.28	8699	15.26
481	30	.05	1673	2.93	526	63	.11	3809	6.68	571	170	.30	8869	15.56
482	29	.05	1702	2.99	527	72	.13	3881	6.81	572	153	.27	9022	15.83
483	31	.05	1733	3.04	528	73	.13	3954	6.94	573	169	.30	9191	16.12
484	39	.07	1772	3.11	529	81	.14	4035	7.08	574	159	.28	9350	16.40
485	33	.06	1805	3.17	530	63	.11	4098	7.19	575	202	.35	9552	16.76
486	25	.04	1830	3.21	531	69	.12	4167	7.31	576	197	.35	9749	17.10
487	38	.07	1868	3.28	532	69	.12	4236	7.43	577	194	.34	9943	17.44
488	38	.07	1906	3.34	533	80	.14	4316	7.57	578	186	.33	10129	17.77

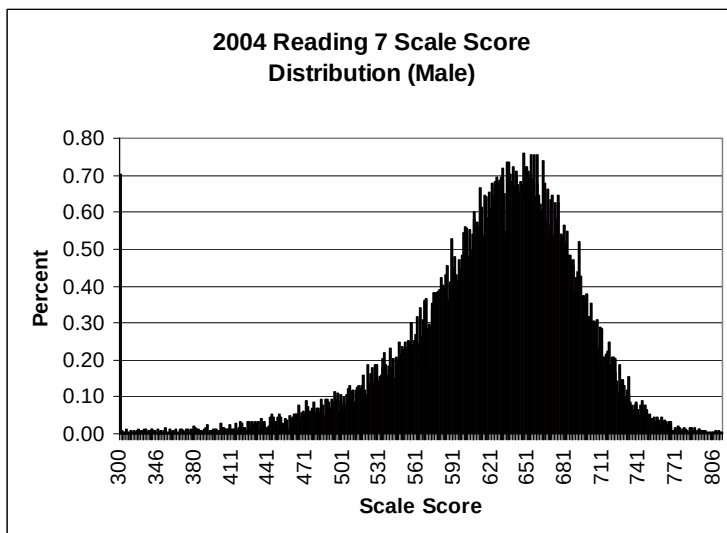
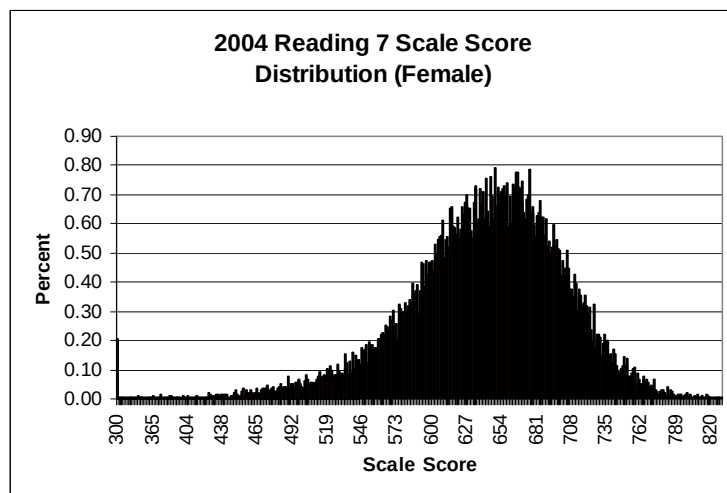
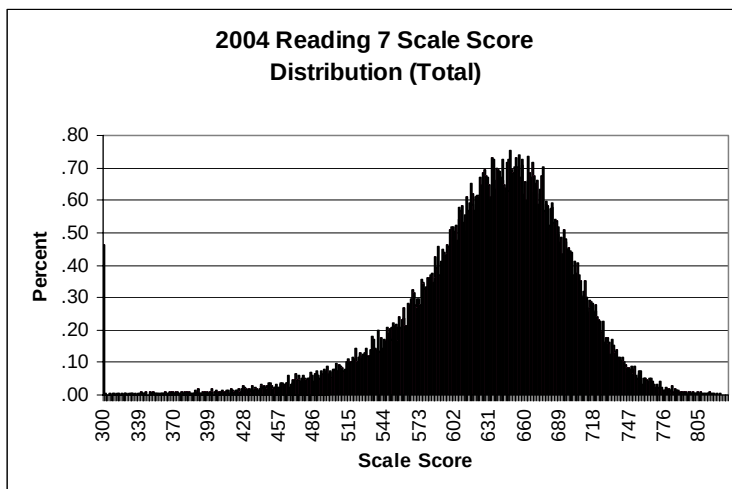
Appendix 15. Reading 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
579	189	.33	10318	18.10	624	382	.67	23076	40.48	669	386	.68	40533	71.10
580	205	.36	10523	18.46	625	369	.65	23445	41.13	670	373	.65	40906	71.76
581	205	.36	10728	18.82	626	390	.68	23835	41.81	671	376	.66	41282	72.42
582	205	.36	10933	19.18	627	383	.67	24218	42.48	672	335	.59	41617	73.00
583	210	.37	11143	19.55	628	395	.69	24613	43.18	673	353	.62	41970	73.62
584	213	.37	11356	19.92	629	385	.68	24998	43.85	674	360	.63	42330	74.25
585	198	.35	11554	20.27	630	382	.67	25380	44.52	675	384	.67	42714	74.93
586	243	.43	11797	20.69	631	370	.65	25750	45.17	676	401	.70	43115	75.63
587	205	.36	12002	21.05	632	343	.60	26093	45.77	677	323	.57	43438	76.20
588	223	.39	12225	21.44	633	347	.61	26440	46.38	678	335	.59	43773	76.79
589	262	.46	12487	21.90	634	417	.73	26857	47.11	679	340	.60	44113	77.38
590	212	.37	12699	22.28	635	415	.73	27272	47.84	680	331	.58	44444	77.96
591	231	.41	12930	22.68	636	361	.63	27633	48.47	681	298	.52	44742	78.49
592	234	.41	13164	23.09	637	377	.66	28010	49.13	682	327	.57	45069	79.06
593	256	.45	13420	23.54	638	399	.70	28409	49.83	683	337	.59	45406	79.65
594	250	.44	13670	23.98	639	395	.69	28804	50.53	684	330	.58	45736	80.23
595	245	.43	13915	24.41	640	394	.69	29198	51.22	685	303	.53	46039	80.76
596	263	.46	14178	24.87	641	381	.67	29579	51.89	686	309	.54	46348	81.30
597	249	.44	14427	25.31	642	414	.73	29993	52.61	687	306	.54	46654	81.84
598	260	.46	14687	25.76	643	376	.66	30369	53.27	688	294	.52	46948	82.35
599	289	.51	14976	26.27	644	370	.65	30739	53.92	689	283	.50	47231	82.85
600	294	.52	15270	26.79	645	364	.64	31103	54.56	690	269	.47	47500	83.32
601	295	.52	15565	27.30	646	409	.72	31512	55.28	691	278	.49	47778	83.81
602	276	.48	15841	27.79	647	415	.73	31927	56.01	692	249	.44	48027	84.25
603	287	.50	16128	28.29	648	358	.63	32285	56.63	693	291	.51	48318	84.76
604	298	.52	16426	28.81	649	431	.76	32716	57.39	694	269	.47	48587	85.23
605	271	.48	16697	29.29	650	395	.69	33111	58.08	695	275	.48	48862	85.71
606	309	.54	17006	29.83	651	390	.68	33501	58.77	696	255	.45	49117	86.16
607	330	.58	17336	30.41	652	400	.70	33901	59.47	697	258	.45	49375	86.61
608	325	.57	17661	30.98	653	397	.70	34298	60.16	698	253	.44	49628	87.06
609	333	.58	17994	31.56	654	417	.73	34715	60.90	699	251	.44	49879	87.50
610	302	.53	18296	32.09	655	402	.71	35117	61.60	700	211	.37	50090	87.87
611	316	.55	18612	32.65	656	423	.74	35540	62.34	701	210	.37	50300	88.23
612	349	.61	18961	33.26	657	383	.67	35923	63.02	702	234	.41	50534	88.65
613	288	.51	19249	33.77	658	414	.73	36337	63.74	703	213	.37	50747	89.02
614	324	.57	19573	34.33	659	403	.71	36740	64.45	704	198	.35	50945	89.37
615	338	.59	19911	34.93	660	352	.62	37092	65.07	705	231	.41	51176	89.77
616	372	.65	20283	35.58	661	374	.66	37466	65.72	706	211	.37	51387	90.14
617	352	.62	20635	36.20	662	343	.60	37809	66.32	707	201	.35	51588	90.49
618	334	.59	20969	36.78	663	420	.74	38229	67.06	708	171	.30	51759	90.79
619	325	.57	21294	37.35	664	378	.66	38607	67.72	709	174	.31	51933	91.10
620	349	.61	21643	37.97	665	391	.69	38998	68.41	710	181	.32	52114	91.42
621	351	.62	21994	38.58	666	383	.67	39381	69.08	711	201	.35	52315	91.77
622	351	.62	22345	39.20	667	409	.72	39790	69.80	712	171	.30	52486	92.07
623	349	.61	22694	39.81	668	357	.63	40147	70.42	713	146	.26	52632	92.33

Appendix 15. Reading 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
714	167	.29	52799	92.62	754	30	.05	56273	98.71	794	4	.01	56920	99.85
715	152	.27	52951	92.89	755	36	.06	56309	98.78	795	1	.00	56921	99.85
716	163	.29	53114	93.17	756	41	.07	56350	98.85	796	3	.01	56924	99.85
717	160	.28	53274	93.45	757	41	.07	56391	98.92	797	6	.01	56930	99.86
718	146	.26	53420	93.71	758	19	.03	56410	98.95	798	6	.01	56936	99.88
719	159	.28	53579	93.99	759	28	.05	56438	99.00	799	3	.01	56939	99.88
720	148	.26	53727	94.25	760	29	.05	56467	99.05	800	5	.01	56944	99.89
721	138	.24	53865	94.49	761	28	.05	56495	99.10	801	3	.01	56947	99.89
722	131	.23	53996	94.72	762	26	.05	56521	99.15	802	3	.01	56950	99.90
723	129	.23	54125	94.94	763	24	.04	56545	99.19	803	3	.01	56953	99.91
724	98	.17	54223	95.12	764	28	.05	56573	99.24	804	4	.01	56957	99.91
725	110	.19	54333	95.31	765	28	.05	56601	99.29	805	3	.01	56960	99.92
726	128	.22	54461	95.53	766	25	.04	56626	99.33	806	5	.01	56965	99.93
727	91	.16	54552	95.69	767	24	.04	56650	99.37	807	3	.01	56968	99.93
728	100	.18	54652	95.87	768	18	.03	56668	99.41	808	2	.00	56970	99.94
729	99	.17	54751	96.04	769	13	.02	56681	99.43	809	2	.00	56972	99.94
730	90	.16	54841	96.20	770	18	.03	56699	99.46	810	3	.01	56975	99.94
731	93	.16	54934	96.36	771	9	.02	56708	99.48	811	2	.00	56977	99.95
732	72	.13	55006	96.49	772	14	.02	56722	99.50	812	2	.00	56979	99.95
733	98	.17	55104	96.66	773	24	.04	56746	99.54	813	2	.00	56981	99.95
734	86	.15	55190	96.81	774	13	.02	56759	99.56	814	4	.01	56985	99.96
735	77	.14	55267	96.95	775	9	.02	56768	99.58	816	2	.00	56987	99.96
736	74	.13	55341	97.08	776	9	.02	56777	99.60	817	3	.01	56990	99.97
737	78	.14	55419	97.21	777	8	.01	56785	99.61	819	1	.00	56991	99.97
738	67	.12	55486	97.33	778	14	.02	56799	99.64	820	3	.01	56994	99.98
739	67	.12	55553	97.45	779	10	.02	56809	99.65	821	1	.00	56995	99.98
740	54	.09	55607	97.54	780	10	.02	56819	99.67	822	2	.00	56997	99.98
741	61	.11	55668	97.65	781	7	.01	56826	99.68	825	1	.00	56998	99.98
742	65	.11	55733	97.77	782	8	.01	56834	99.70	830	2	.00	57000	99.99
743	57	.10	55790	97.87	783	16	.03	56850	99.72	836	1	.00	57001	99.99
744	54	.09	55844	97.96	784	4	.01	56854	99.73	838	1	.00	57002	99.99
745	40	.07	55884	98.03	785	11	.02	56865	99.75	854	1	.00	57003	99.99
746	47	.08	55931	98.11	786	8	.01	56873	99.76	861	1	.00	57004	99.99
747	47	.08	55978	98.19	787	8	.01	56881	99.78	868	1	.00	57005	100.00
748	46	.08	56024	98.28	788	7	.01	56888	99.79	878	1	.00	57006	100.00
749	50	.09	56074	98.36	789	6	.01	56894	99.80	966	1	.00	57007	100.00
750	46	.08	56120	98.44	790	6	.01	56900	99.81					
751	38	.07	56158	98.51	791	4	.01	56904	99.82					
752	50	.09	56208	98.60	792	6	.01	56910	99.83					
753	35	.06	56243	98.66	793	6	.01	56916	99.84					

Figure 15. Reading 7 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 16. Writing 7 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
240	34	.06	34	0.06	317	4	.01	125	0.22	362	15	.03	488	0.86
247	1	.00	35	0.06	318	3	.01	128	0.22	363	16	.03	504	0.88
250	1	.00	36	0.06	320	4	.01	132	0.23	364	18	.03	522	0.92
253	1	.00	37	0.06	321	7	.01	139	0.24	365	20	.04	542	0.95
255	1	.00	38	0.07	322	5	.01	144	0.25	366	12	.02	554	0.97
258	1	.00	39	0.07	323	5	.01	149	0.26	367	19	.03	573	1.00
259	1	.00	40	0.07	324	3	.01	152	0.27	368	12	.02	585	1.03
266	1	.00	41	0.07	325	9	.02	161	0.28	369	21	.04	606	1.06
268	1	.00	42	0.07	326	5	.01	166	0.29	370	19	.03	625	1.10
270	1	.00	43	0.08	327	2	.00	168	0.29	371	21	.04	646	1.13
271	2	.00	45	0.08	328	5	.01	173	0.30	372	13	.02	659	1.16
272	1	.00	46	0.08	329	2	.00	175	0.31	373	16	.03	675	1.18
273	2	.00	48	0.08	330	7	.01	182	0.32	374	19	.03	694	1.22
275	1	.00	49	0.09	331	3	.01	185	0.32	375	22	.04	716	1.26
277	1	.00	50	0.09	332	5	.01	190	0.33	376	24	.04	740	1.30
280	1	.00	51	0.09	333	6	.01	196	0.34	377	11	.02	751	1.32
281	1	.00	52	0.09	334	4	.01	200	0.35	378	25	.04	776	1.36
282	1	.00	53	0.09	335	5	.01	205	0.36	379	29	.05	805	1.41
285	1	.00	54	0.09	336	6	.01	211	0.37	380	22	.04	827	1.45
286	2	.00	56	0.10	337	4	.01	215	0.38	381	27	.05	854	1.50
287	2	.00	58	0.10	338	6	.01	221	0.39	382	27	.05	881	1.55
289	3	.01	61	0.11	339	11	.02	232	0.41	383	31	.05	912	1.60
291	2	.00	63	0.11	340	8	.01	240	0.42	384	34	.06	946	1.66
293	2	.00	65	0.11	341	7	.01	247	0.43	385	27	.05	973	1.71
295	1	.00	66	0.12	342	3	.01	250	0.44	386	30	.05	1003	1.76
296	3	.01	69	0.12	343	4	.01	254	0.45	387	29	.05	1032	1.81
297	3	.01	72	0.13	344	9	.02	263	0.46	388	39	.07	1071	1.88
298	2	.00	74	0.13	345	11	.02	274	0.48	389	42	.07	1113	1.95
300	1	.00	75	0.13	346	7	.01	281	0.49	390	27	.05	1140	2.00
301	4	.01	79	0.14	347	3	.01	284	0.50	391	47	.08	1187	2.08
302	2	.00	81	0.14	348	13	.02	297	0.52	392	54	.09	1241	2.18
303	2	.00	83	0.15	349	8	.01	305	0.53	393	30	.05	1271	2.23
304	3	.01	86	0.15	350	11	.02	316	0.55	394	37	.06	1308	2.29
305	1	.00	87	0.15	351	13	.02	329	0.58	395	46	.08	1354	2.37
306	6	.01	93	0.16	352	9	.02	338	0.59	396	38	.07	1392	2.44
307	2	.00	95	0.17	353	7	.01	345	0.61	397	54	.09	1446	2.54
308	3	.01	98	0.17	354	10	.02	355	0.62	398	37	.06	1483	2.60
309	6	.01	104	0.18	355	18	.03	373	0.65	399	55	.10	1538	2.70
310	3	.01	107	0.19	356	7	.01	380	0.67	400	40	.07	1578	2.77
312	4	.01	111	0.19	357	21	.04	401	0.70	401	42	.07	1620	2.84
313	3	.01	114	0.20	358	20	.04	421	0.74	402	41	.07	1661	2.91
314	2	.00	116	0.20	359	16	.03	437	0.77	403	50	.09	1711	3.00
315	1	.00	117	0.21	360	24	.04	461	0.81	404	50	.09	1761	3.09
316	4	.01	121	0.21	361	12	.02	473	0.83	405	46	.08	1807	3.17

Appendix 16. Writing 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
406	46	.08	1853	3.25	451	133	.23	5866	10.29	496	259	.45	14288	25.06
407	54	.09	1907	3.34	452	116	.20	5982	10.49	497	261	.46	14549	25.52
408	59	.10	1966	3.45	453	127	.22	6109	10.71	498	262	.46	14811	25.98
409	56	.10	2022	3.55	454	131	.23	6240	10.94	499	224	.39	15035	26.37
410	63	.11	2085	3.66	455	123	.22	6363	11.16	500	285	.50	15320	26.87
411	48	.08	2133	3.74	456	140	.25	6503	11.41	501	257	.45	15577	27.32
412	69	.12	2202	3.86	457	140	.25	6643	11.65	502	235	.41	15812	27.73
413	67	.12	2269	3.98	458	153	.27	6796	11.92	503	267	.47	16079	28.20
414	65	.11	2334	4.09	459	135	.24	6931	12.16	504	271	.48	16350	28.68
415	60	.11	2394	4.20	460	153	.27	7084	12.42	505	255	.45	16605	29.12
416	70	.12	2464	4.32	461	161	.28	7245	12.71	506	260	.46	16865	29.58
417	76	.13	2540	4.45	462	155	.27	7400	12.98	507	278	.49	17143	30.07
418	75	.13	2615	4.59	463	159	.28	7559	13.26	508	284	.50	17427	30.57
419	70	.12	2685	4.71	464	166	.29	7725	13.55	509	275	.48	17702	31.05
420	76	.13	2761	4.84	465	181	.32	7906	13.87	510	266	.47	17968	31.51
421	65	.11	2826	4.96	466	171	.30	8077	14.17	511	316	.55	18284	32.07
422	72	.13	2898	5.08	467	165	.29	8242	14.46	512	305	.53	18589	32.60
423	75	.13	2973	5.21	468	174	.31	8416	14.76	513	299	.52	18888	33.13
424	81	.14	3054	5.36	469	185	.32	8601	15.09	514	286	.50	19174	33.63
425	79	.14	3133	5.49	470	172	.30	8773	15.39	515	301	.53	19475	34.16
426	79	.14	3212	5.63	471	186	.33	8959	15.71	516	300	.53	19775	34.68
427	89	.16	3301	5.79	472	194	.34	9153	16.05	517	290	.51	20065	35.19
428	87	.15	3388	5.94	473	187	.33	9340	16.38	518	306	.54	20371	35.73
429	81	.14	3469	6.08	474	185	.32	9525	16.71	519	301	.53	20672	36.26
430	82	.14	3551	6.23	475	194	.34	9719	17.05	520	282	.49	20954	36.75
431	85	.15	3636	6.38	476	186	.33	9905	17.37	521	279	.49	21233	37.24
432	75	.13	3711	6.51	477	186	.33	10091	17.70	522	308	.54	21541	37.78
433	90	.16	3801	6.67	478	197	.35	10288	18.04	523	336	.59	21877	38.37
434	85	.15	3886	6.82	479	194	.34	10482	18.38	524	330	.58	22207	38.95
435	128	.22	4014	7.04	480	183	.32	10665	18.71	525	318	.56	22525	39.51
436	84	.15	4098	7.19	481	213	.37	10878	19.08	526	302	.53	22827	40.04
437	82	.14	4180	7.33	482	209	.37	11087	19.45	527	353	.62	23180	40.66
438	107	.19	4287	7.52	483	221	.39	11308	19.83	528	304	.53	23484	41.19
439	107	.19	4394	7.71	484	219	.38	11527	20.22	529	310	.54	23794	41.73
440	119	.21	4513	7.92	485	251	.44	11778	20.66	530	331	.58	24125	42.31
441	105	.18	4618	8.10	486	221	.39	11999	21.04	531	285	.50	24410	42.81
442	113	.20	4731	8.30	487	216	.38	12215	21.42	532	321	.56	24731	43.38
443	116	.20	4847	8.50	488	217	.38	12432	21.80	533	302	.53	25033	43.91
444	114	.20	4961	8.70	489	223	.39	12655	22.20	534	308	.54	25341	44.45
445	119	.21	5080	8.91	490	234	.41	12889	22.61	535	328	.58	25669	45.02
446	124	.22	5204	9.13	491	212	.37	13101	22.98	536	348	.61	26017	45.63
447	130	.23	5334	9.36	492	224	.39	13325	23.37	537	351	.62	26368	46.25
448	136	.24	5470	9.59	493	245	.43	13570	23.80	538	310	.54	26678	46.79
449	141	.25	5611	9.84	494	239	.42	13809	24.22	539	304	.53	26982	47.32
450	122	.21	5733	10.06	495	220	.39	14029	24.61	540	340	.60	27322	47.92

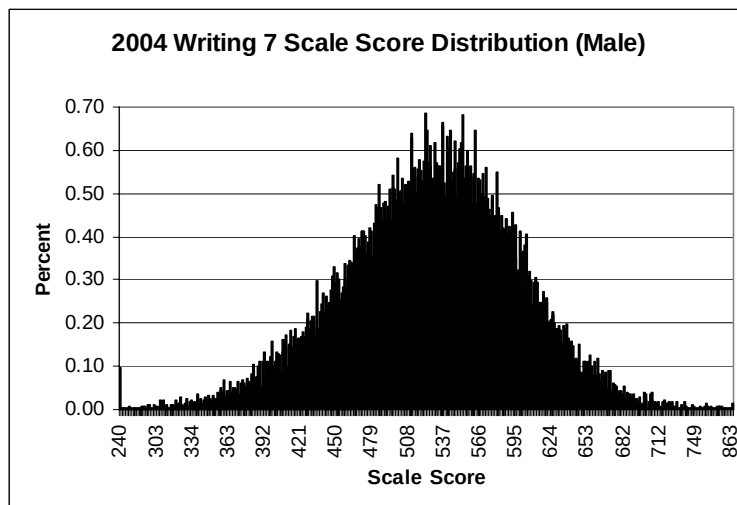
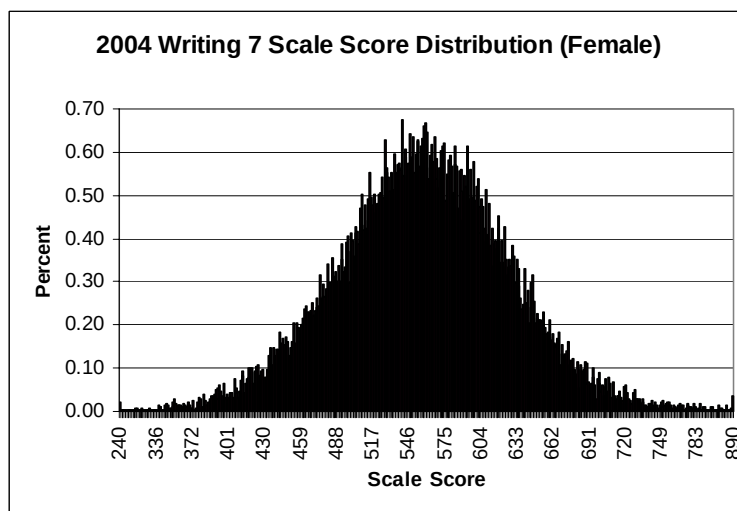
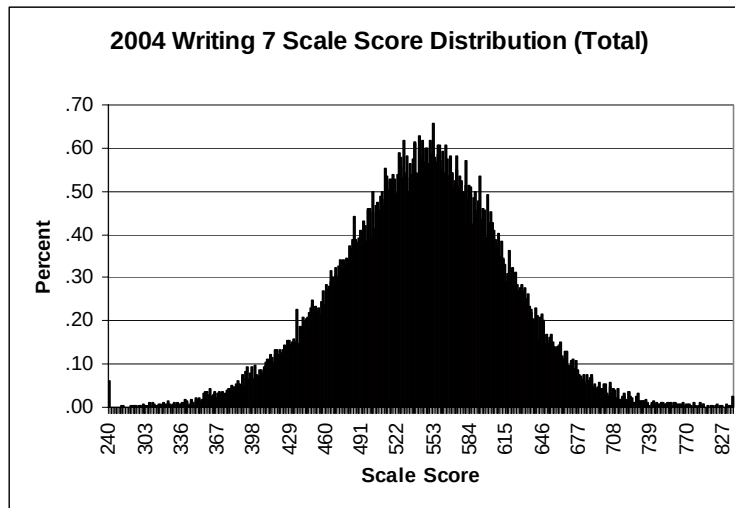
Appendix 16. Writing 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
541	359	.63	27681	48.55	586	241	.42	41871	73.44	631	157	.28	51398	90.15
542	329	.58	28010	49.13	587	277	.49	42148	73.92	632	136	.24	51534	90.39
543	353	.62	28363	49.75	588	285	.50	42433	74.42	633	143	.25	51677	90.64
544	323	.57	28686	50.31	589	260	.46	42693	74.88	634	149	.26	51826	90.90
545	312	.55	28998	50.86	590	247	.43	42940	75.31	635	133	.23	51959	91.13
546	341	.60	29339	51.46	591	273	.48	43213	75.79	636	128	.22	52087	91.36
547	341	.60	29680	52.06	592	262	.46	43475	76.25	637	124	.22	52211	91.57
548	308	.54	29988	52.60	593	304	.53	43779	76.78	638	117	.21	52328	91.78
549	322	.56	30310	53.16	594	247	.43	44026	77.22	639	113	.20	52441	91.98
550	353	.62	30663	53.78	595	262	.46	44288	77.68	640	132	.23	52573	92.21
551	334	.59	30997	54.37	596	259	.45	44547	78.13	641	116	.20	52689	92.41
552	338	.59	31335	54.96	597	231	.41	44778	78.54	642	121	.21	52810	92.62
553	374	.66	31709	55.61	598	224	.39	45002	78.93	643	91	.16	52901	92.78
554	330	.58	32039	56.19	599	281	.49	45283	79.42	644	118	.21	53019	92.99
555	323	.57	32362	56.76	600	242	.42	45525	79.85	645	100	.18	53119	93.17
556	346	.61	32708	57.37	601	243	.43	45768	80.27	646	122	.21	53241	93.38
557	334	.59	33042	57.95	602	257	.45	46025	80.72	647	115	.20	53356	93.58
558	345	.61	33387	58.56	603	243	.43	46268	81.15	648	82	.14	53438	93.72
559	314	.55	33701	59.11	604	233	.41	46501	81.56	649	84	.15	53522	93.87
560	325	.57	34026	59.68	605	214	.38	46715	81.93	650	96	.17	53618	94.04
561	337	.59	34363	60.27	606	222	.39	46937	82.32	651	84	.15	53702	94.19
562	309	.54	34672	60.81	607	211	.37	47148	82.69	652	92	.16	53794	94.35
563	346	.61	35018	61.42	608	230	.40	47378	83.10	653	89	.16	53883	94.51
564	304	.53	35322	61.95	609	180	.32	47558	83.41	654	96	.17	53979	94.67
565	328	.58	35650	62.53	610	199	.35	47757	83.76	655	86	.15	54065	94.82
566	305	.53	35955	63.06	611	220	.39	47977	84.15	656	77	.14	54142	94.96
567	332	.58	36287	63.64	612	196	.34	48173	84.49	657	79	.14	54221	95.10
568	309	.54	36596	64.19	613	194	.34	48367	84.83	658	74	.13	54295	95.23
569	309	.54	36905	64.73	614	188	.33	48555	85.16	659	80	.14	54375	95.37
570	288	.51	37193	65.23	615	166	.29	48721	85.45	660	82	.14	54457	95.51
571	299	.52	37492	65.76	616	177	.31	48898	85.76	661	60	.11	54517	95.62
572	331	.58	37823	66.34	617	177	.31	49075	86.07	662	85	.15	54602	95.77
573	313	.55	38136	66.89	618	206	.36	49281	86.43	663	68	.12	54670	95.89
574	290	.51	38426	67.40	619	183	.32	49464	86.75	664	63	.11	54733	96.00
575	304	.53	38730	67.93	620	168	.29	49632	87.05	665	56	.10	54789	96.09
576	279	.49	39009	68.42	621	185	.32	49817	87.37	666	73	.13	54862	96.22
577	298	.52	39307	68.94	622	155	.27	49972	87.65	667	74	.13	54936	96.35
578	284	.50	39591	69.44	623	179	.31	50151	87.96	668	55	.10	54991	96.45
579	282	.49	39873	69.93	624	154	.27	50305	88.23	669	54	.09	55045	96.54
580	325	.57	40198	70.50	625	162	.28	50467	88.51	670	52	.09	55097	96.63
581	292	.51	40490	71.02	626	154	.27	50621	88.78	671	62	.11	55159	96.74
582	277	.49	40767	71.50	627	157	.28	50778	89.06	672	63	.11	55222	96.85
583	292	.51	41059	72.01	628	148	.26	50926	89.32	673	52	.09	55274	96.94
584	290	.51	41349	72.52	629	161	.28	51087	89.60	674	51	.09	55325	97.03
585	281	.49	41630	73.01	630	154	.27	51241	89.87	675	62	.11	55387	97.14

Appendix 16. Writing 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
676	43	.08	55430	97.22	721	21	.04	56591	99.25	766	4	.01	56892	99.78
677	49	.09	55479	97.30	722	15	.03	56606	99.28	767	6	.01	56898	99.79
678	44	.08	55523	97.38	723	13	.02	56619	99.30	768	1	.00	56899	99.79
679	40	.07	55563	97.45	724	7	.01	56626	99.32	769	2	.00	56901	99.80
680	32	.06	55595	97.51	725	7	.01	56633	99.33	770	5	.01	56906	99.81
681	37	.06	55632	97.57	726	6	.01	56639	99.34	771	5	.01	56911	99.82
682	43	.08	55675	97.65	727	14	.02	56653	99.36	773	4	.01	56915	99.82
683	31	.05	55706	97.70	728	19	.03	56672	99.40	774	3	.01	56918	99.83
684	34	.06	55740	97.76	729	9	.02	56681	99.41	777	2	.00	56920	99.83
685	42	.07	55782	97.84	730	8	.01	56689	99.43	778	1	.00	56921	99.83
686	35	.06	55817	97.90	731	9	.02	56698	99.44	779	6	.01	56927	99.84
687	38	.07	55855	97.96	732	9	.02	56707	99.46	780	3	.01	56930	99.85
688	43	.08	55898	98.04	733	8	.01	56715	99.47	782	3	.01	56933	99.85
689	39	.07	55937	98.11	734	9	.02	56724	99.49	783	1	.00	56934	99.86
690	27	.05	55964	98.15	735	11	.02	56735	99.51	784	2	.00	56936	99.86
691	30	.05	55994	98.21	736	6	.01	56741	99.52	785	1	.00	56937	99.86
692	23	.04	56017	98.25	737	4	.01	56745	99.52	786	7	.01	56944	99.87
693	25	.04	56042	98.29	738	3	.01	56748	99.53	787	3	.01	56947	99.88
694	27	.05	56069	98.34	739	1	.00	56749	99.53	789	5	.01	56952	99.89
695	33	.06	56102	98.40	740	5	.01	56754	99.54	790	5	.01	56957	99.90
696	25	.04	56127	98.44	741	6	.01	56760	99.55	793	1	.00	56958	99.90
697	11	.02	56138	98.46	742	8	.01	56768	99.57	796	1	.00	56959	99.90
698	25	.04	56163	98.50	743	5	.01	56773	99.57	797	1	.00	56960	99.90
699	30	.05	56193	98.56	744	3	.01	56776	99.58	799	2	.00	56962	99.91
700	31	.05	56224	98.61	745	6	.01	56782	99.59	803	1	.00	56963	99.91
701	23	.04	56247	98.65	746	5	.01	56787	99.60	804	3	.01	56966	99.91
702	18	.03	56265	98.68	747	5	.01	56792	99.61	805	1	.00	56967	99.91
703	15	.03	56280	98.71	748	6	.01	56798	99.62	807	3	.01	56970	99.92
704	27	.05	56307	98.76	749	7	.01	56805	99.63	808	1	.00	56971	99.92
705	33	.06	56340	98.81	750	7	.01	56812	99.64	809	2	.00	56973	99.92
706	19	.03	56359	98.85	751	4	.01	56816	99.65	814	1	.00	56974	99.93
707	25	.04	56384	98.89	752	5	.01	56821	99.66	816	5	.01	56979	99.94
708	23	.04	56407	98.93	753	5	.01	56826	99.67	817	1	.00	56980	99.94
709	6	.01	56413	98.94	754	7	.01	56833	99.68	820	2	.00	56982	99.94
710	13	.02	56426	98.97	755	7	.01	56840	99.69	826	2	.00	56984	99.94
711	24	.04	56450	99.01	756	6	.01	56846	99.70	827	2	.00	56986	99.95
712	11	.02	56461	99.03	757	5	.01	56851	99.71	828	1	.00	56987	99.95
713	10	.02	56471	99.04	758	3	.01	56854	99.72	832	1	.00	56988	99.95
714	11	.02	56482	99.06	759	6	.01	56860	99.73	835	5	.01	56993	99.96
715	14	.02	56496	99.09	760	6	.01	56866	99.74	842	1	.00	56994	99.96
716	18	.03	56514	99.12	761	5	.01	56871	99.75	846	2	.00	56996	99.96
717	15	.03	56529	99.15	762	4	.01	56875	99.75	851	2	.00	56998	99.97
718	11	.02	56540	99.17	763	5	.01	56880	99.76	863	1	.00	56999	99.97
719	9	.02	56549	99.18	764	5	.01	56885	99.77	876	3	.01	57002	99.98
720	21	.04	56570	99.22	765	3	.01	56888	99.78	890	14	.02	57016	100.00

Figure 16. Writing 7 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 17. Mathematics 7 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
280	271	.47	271	0.47	324	7	.01	575	1.01	368	24	.04	1316	2.30
281	1	.00	272	0.48	325	6	.01	581	1.02	369	29	.05	1345	2.35
282	4	.01	276	0.48	326	6	.01	587	1.03	370	25	.04	1370	2.40
283	1	.00	277	0.48	327	15	.03	602	1.05	371	28	.05	1398	2.45
284	4	.01	281	0.49	328	14	.02	616	1.08	372	42	.07	1440	2.52
285	3	.01	284	0.50	329	9	.02	625	1.09	373	35	.06	1475	2.58
286	9	.02	293	0.51	330	10	.02	635	1.11	374	30	.05	1505	2.63
287	14	.02	307	0.54	331	14	.02	649	1.14	375	34	.06	1539	2.69
288	8	.01	315	0.55	332	13	.02	662	1.16	376	29	.05	1568	2.74
289	4	.01	319	0.56	333	16	.03	678	1.19	377	38	.07	1606	2.81
290	4	.01	323	0.57	334	14	.02	692	1.21	378	24	.04	1630	2.85
291	8	.01	331	0.58	335	12	.02	704	1.23	379	33	.06	1663	2.91
292	7	.01	338	0.59	336	15	.03	719	1.26	380	46	.08	1709	2.99
293	2	.00	340	0.60	337	13	.02	732	1.28	381	40	.07	1749	3.06
294	3	.01	343	0.60	338	8	.01	740	1.30	382	38	.07	1787	3.13
295	10	.02	353	0.62	339	20	.04	760	1.33	383	33	.06	1820	3.19
296	7	.01	360	0.63	340	11	.02	771	1.35	384	32	.06	1852	3.24
297	4	.01	364	0.64	341	10	.02	781	1.37	385	24	.04	1876	3.28
298	7	.01	371	0.65	342	14	.02	795	1.39	386	39	.07	1915	3.35
299	6	.01	377	0.66	343	11	.02	806	1.41	387	44	.08	1959	3.43
300	6	.01	383	0.67	344	15	.03	821	1.44	388	37	.06	1996	3.49
301	3	.01	386	0.68	345	21	.04	842	1.47	389	31	.05	2027	3.55
302	6	.01	392	0.69	346	20	.04	862	1.51	390	44	.08	2071	3.63
303	9	.02	401	0.70	347	21	.04	883	1.55	391	42	.07	2113	3.70
304	6	.01	407	0.71	348	15	.03	898	1.57	392	45	.08	2158	3.78
305	9	.02	416	0.73	349	19	.03	917	1.61	393	52	.09	2210	3.87
306	8	.01	424	0.74	350	19	.03	936	1.64	394	40	.07	2250	3.94
307	6	.01	430	0.75	351	18	.03	954	1.67	395	30	.05	2280	3.99
308	10	.02	440	0.77	352	11	.02	965	1.69	396	42	.07	2322	4.06
309	7	.01	447	0.78	353	16	.03	981	1.72	397	56	.10	2378	4.16
310	8	.01	455	0.80	354	16	.03	997	1.75	398	46	.08	2424	4.24
311	8	.01	463	0.81	355	14	.02	1011	1.77	399	48	.08	2472	4.33
312	11	.02	474	0.83	356	21	.04	1032	1.81	400	62	.11	2534	4.44
313	3	.01	477	0.83	357	17	.03	1049	1.84	401	46	.08	2580	4.52
314	6	.01	483	0.85	358	13	.02	1062	1.86	402	38	.07	2618	4.58
315	8	.01	491	0.86	359	27	.05	1089	1.91	403	43	.08	2661	4.66
316	10	.02	501	0.88	360	20	.04	1109	1.94	404	52	.09	2713	4.75
317	6	.01	507	0.89	361	31	.05	1140	2.00	405	48	.08	2761	4.83
318	11	.02	518	0.91	362	20	.04	1160	2.03	406	69	.12	2830	4.95
319	5	.01	523	0.92	363	19	.03	1179	2.06	407	59	.10	2889	5.06
320	8	.01	531	0.93	364	37	.06	1216	2.13	408	57	.10	2946	5.16
321	15	.03	546	0.96	365	20	.04	1236	2.16	409	75	.13	3021	5.29
322	11	.02	557	0.98	366	20	.04	1256	2.20	410	59	.10	3080	5.39
323	11	.02	568	0.99	367	36	.06	1292	2.26	411	59	.10	3139	5.49

Appendix 17. Mathematics 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
412	55	.10	3194	5.59	457	143	.25	7442	13.03	502	242	.42	16389	28.69
413	66	.12	3260	5.71	458	166	.29	7608	13.32	503	246	.43	16635	29.12
414	53	.09	3313	5.80	459	140	.25	7748	13.56	504	264	.46	16899	29.58
415	77	.13	3390	5.93	460	134	.23	7882	13.80	505	296	.52	17195	30.10
416	65	.11	3455	6.05	461	150	.26	8032	14.06	506	251	.44	17446	30.54
417	70	.12	3525	6.17	462	148	.26	8180	14.32	507	255	.45	17701	30.99
418	74	.13	3599	6.30	463	128	.22	8308	14.54	508	268	.47	17969	31.45
419	89	.16	3688	6.46	464	159	.28	8467	14.82	509	277	.48	18246	31.94
420	70	.12	3758	6.58	465	176	.31	8643	15.13	510	220	.39	18466	32.32
421	67	.12	3825	6.70	466	139	.24	8782	15.37	511	270	.47	18736	32.80
422	80	.14	3905	6.84	467	155	.27	8937	15.64	512	294	.51	19030	33.31
423	57	.10	3962	6.94	468	163	.29	9100	15.93	513	287	.50	19317	33.81
424	66	.12	4028	7.05	469	157	.27	9257	16.20	514	274	.48	19591	34.29
425	66	.12	4094	7.17	470	170	.30	9427	16.50	515	286	.50	19877	34.79
426	82	.14	4176	7.31	471	189	.33	9616	16.83	516	271	.47	20148	35.27
427	90	.16	4266	7.47	472	165	.29	9781	17.12	517	294	.51	20442	35.78
428	76	.13	4342	7.60	473	181	.32	9962	17.44	518	284	.50	20726	36.28
429	87	.15	4429	7.75	474	198	.35	10160	17.78	519	273	.48	20999	36.76
430	83	.15	4512	7.90	475	202	.35	10362	18.14	520	280	.49	21279	37.25
431	90	.16	4602	8.06	476	188	.33	10550	18.47	521	305	.53	21584	37.78
432	77	.13	4679	8.19	477	191	.33	10741	18.80	522	297	.52	21881	38.30
433	92	.16	4771	8.35	478	191	.33	10932	19.14	523	318	.56	22199	38.86
434	101	.18	4872	8.53	479	225	.39	11157	19.53	524	326	.57	22525	39.43
435	90	.16	4962	8.69	480	179	.31	11336	19.84	525	286	.50	22811	39.93
436	81	.14	5043	8.83	481	221	.39	11557	20.23	526	309	.54	23120	40.47
437	120	.21	5163	9.04	482	182	.32	11739	20.55	527	342	.60	23462	41.07
438	101	.18	5264	9.21	483	218	.38	11957	20.93	528	315	.55	23777	41.62
439	96	.17	5360	9.38	484	220	.39	12177	21.32	529	291	.51	24068	42.13
440	111	.19	5471	9.58	485	188	.33	12365	21.64	530	289	.51	24357	42.64
441	95	.17	5566	9.74	486	217	.38	12582	22.02	531	306	.54	24663	43.17
442	93	.16	5659	9.91	487	216	.38	12798	22.40	532	302	.53	24965	43.70
443	84	.15	5743	10.05	488	235	.41	13033	22.81	533	301	.53	25266	44.23
444	101	.18	5844	10.23	489	210	.37	13243	23.18	534	301	.53	25567	44.75
445	94	.16	5938	10.39	490	228	.40	13471	23.58	535	315	.55	25882	45.31
446	110	.19	6048	10.59	491	239	.42	13710	24.00	536	308	.54	26190	45.85
447	115	.20	6163	10.79	492	220	.39	13930	24.38	537	284	.50	26474	46.34
448	132	.23	6295	11.02	493	230	.40	14160	24.79	538	326	.57	26800	46.91
449	105	.18	6400	11.20	494	230	.40	14390	25.19	539	316	.55	27116	47.47
450	121	.21	6521	11.41	495	226	.40	14616	25.59	540	317	.55	27433	48.02
451	119	.21	6640	11.62	496	264	.46	14880	26.05	541	312	.55	27745	48.57
452	99	.17	6739	11.80	497	271	.47	15151	26.52	542	324	.57	28069	49.13
453	126	.22	6865	12.02	498	245	.43	15396	26.95	543	289	.51	28358	49.64
454	145	.25	7010	12.27	499	288	.50	15684	27.45	544	325	.57	28683	50.21
455	136	.24	7146	12.51	500	214	.37	15898	27.83	545	324	.57	29007	50.78
456	153	.27	7299	12.78	501	249	.44	16147	28.27	546	330	.58	29337	51.35

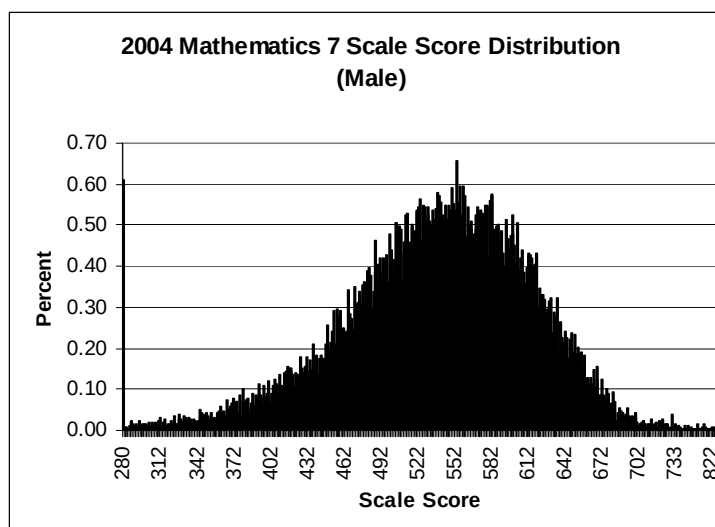
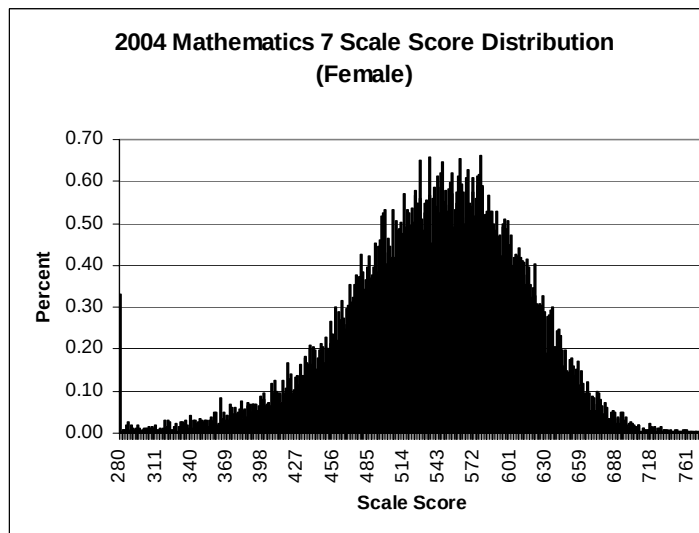
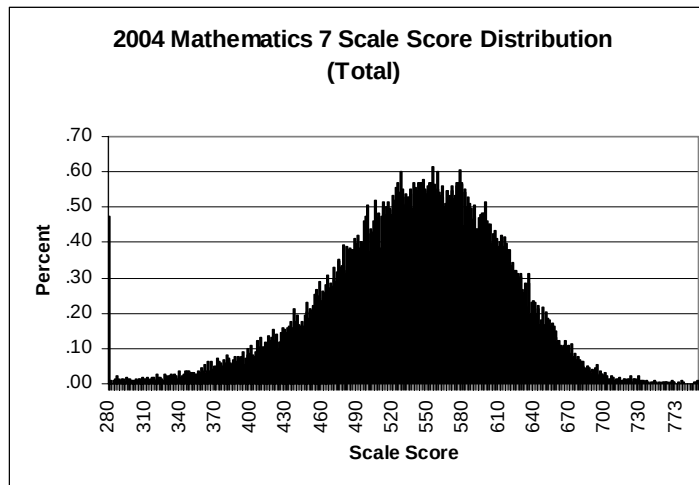
Appendix 17. Mathematics 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
547	315	.55	29652	51.91	592	250	.44	43384	75.94	637	113	.20	52933	92.66
548	313	.55	29965	52.45	593	248	.43	43632	76.38	638	132	.23	53065	92.89
549	308	.54	30273	52.99	594	268	.47	43900	76.85	639	125	.22	53190	93.11
550	320	.56	30593	53.55	595	274	.48	44174	77.33	640	134	.23	53324	93.34
551	324	.57	30917	54.12	596	276	.48	44450	77.81	641	132	.23	53456	93.57
552	323	.57	31240	54.69	597	272	.48	44722	78.29	642	113	.20	53569	93.77
553	326	.57	31566	55.26	598	275	.48	44997	78.77	643	127	.22	53696	93.99
554	352	.62	31918	55.87	599	295	.52	45292	79.28	644	121	.21	53817	94.21
555	300	.53	32218	56.40	600	262	.46	45554	79.74	645	95	.17	53912	94.37
556	322	.56	32540	56.96	601	257	.45	45811	80.19	646	104	.18	54016	94.55
557	304	.53	32844	57.49	602	251	.44	46062	80.63	647	125	.22	54141	94.77
558	314	.55	33158	58.04	603	259	.45	46321	81.08	648	88	.15	54229	94.93
559	344	.60	33502	58.64	604	227	.40	46548	81.48	649	96	.17	54325	95.10
560	310	.54	33812	59.19	605	222	.39	46770	81.87	650	117	.20	54442	95.30
561	304	.53	34116	59.72	606	242	.42	47012	82.29	651	84	.15	54526	95.45
562	303	.53	34419	60.25	607	247	.43	47259	82.73	652	105	.18	54631	95.63
563	319	.56	34738	60.81	608	236	.41	47495	83.14	653	103	.18	54734	95.81
564	286	.50	35024	61.31	609	198	.35	47693	83.49	654	93	.16	54827	95.97
565	292	.51	35316	61.82	610	221	.39	47914	83.87	655	98	.17	54925	96.15
566	312	.55	35628	62.37	611	230	.40	48144	84.28	656	87	.15	55012	96.30
567	311	.54	35939	62.91	612	239	.42	48383	84.69	657	93	.16	55105	96.46
568	292	.51	36231	63.42	613	229	.40	48612	85.09	658	86	.15	55191	96.61
569	304	.53	36535	63.95	614	223	.39	48835	85.48	659	76	.13	55267	96.74
570	313	.55	36848	64.50	615	238	.42	49073	85.90	660	69	.12	55336	96.86
571	319	.56	37167	65.06	616	227	.40	49300	86.30	661	70	.12	55406	96.99
572	299	.52	37466	65.58	617	205	.36	49505	86.66	662	59	.10	55465	97.09
573	305	.53	37771	66.12	618	217	.38	49722	87.04	663	63	.11	55528	97.20
574	321	.56	38092	66.68	619	216	.38	49938	87.42	664	59	.10	55587	97.30
575	326	.57	38418	67.25	620	184	.32	50122	87.74	665	63	.11	55650	97.41
576	325	.57	38743	67.82	621	192	.34	50314	88.07	666	69	.12	55719	97.54
577	345	.60	39088	68.42	622	196	.34	50510	88.42	667	46	.08	55765	97.62
578	323	.57	39411	68.99	623	183	.32	50693	88.74	668	60	.11	55825	97.72
579	325	.57	39736	69.56	624	182	.32	50875	89.06	669	61	.11	55886	97.83
580	255	.45	39991	70.00	625	175	.31	51050	89.36	670	48	.08	55934	97.91
581	309	.54	40300	70.54	626	178	.31	51228	89.67	671	40	.07	55974	97.98
582	316	.55	40616	71.10	627	168	.29	51396	89.97	672	65	.11	56039	98.10
583	287	.50	40903	71.60	628	178	.31	51574	90.28	673	44	.08	56083	98.17
584	302	.53	41205	72.13	629	173	.30	51747	90.58	674	50	.09	56133	98.26
585	276	.48	41481	72.61	630	153	.27	51900	90.85	675	45	.08	56178	98.34
586	292	.51	41773	73.12	631	147	.26	52047	91.11	676	39	.07	56217	98.41
587	285	.50	42058	73.62	632	147	.26	52194	91.36	677	44	.08	56261	98.48
588	267	.47	42325	74.09	633	162	.28	52356	91.65	678	34	.06	56295	98.54
589	271	.47	42596	74.56	634	123	.22	52479	91.86	679	38	.07	56333	98.61
590	289	.51	42885	75.07	635	163	.29	52642	92.15	680	36	.06	56369	98.67
591	249	.44	43134	75.51	636	178	.31	52820	92.46	681	28	.05	56397	98.72

Appendix 17. Mathematics 7 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
682	37	.06	56434	98.79	715	4	.01	56923	99.64	749	1	.00	57068	99.90
683	27	.05	56461	98.83	716	8	.01	56931	99.66	750	2	.00	57070	99.90
684	21	.04	56482	98.87	717	8	.01	56939	99.67	751	3	.01	57073	99.91
685	28	.05	56510	98.92	718	6	.01	56945	99.68	752	2	.00	57075	99.91
686	29	.05	56539	98.97	719	9	.02	56954	99.70	753	2	.00	57077	99.91
687	27	.05	56566	99.02	720	2	.00	56956	99.70	754	3	.01	57080	99.92
688	20	.04	56586	99.05	721	8	.01	56964	99.71	756	1	.00	57081	99.92
689	24	.04	56610	99.09	722	12	.02	56976	99.74	758	1	.00	57082	99.92
690	19	.03	56629	99.13	723	2	.00	56978	99.74	761	2	.00	57084	99.92
691	16	.03	56645	99.16	724	8	.01	56986	99.75	766	4	.01	57088	99.93
692	25	.04	56670	99.20	725	7	.01	56993	99.77	769	2	.00	57090	99.94
693	30	.05	56700	99.25	726	8	.01	57001	99.78	771	2	.00	57092	99.94
694	16	.03	56716	99.28	727	5	.01	57006	99.79	773	1	.00	57093	99.94
695	14	.02	56730	99.31	728	3	.01	57009	99.79	775	1	.00	57094	99.94
696	20	.04	56750	99.34	729	13	.02	57022	99.82	776	1	.00	57095	99.94
697	15	.03	56765	99.37	730	4	.01	57026	99.82	781	3	.01	57098	99.95
698	15	.03	56780	99.39	731	2	.00	57028	99.83	784	1	.00	57099	99.95
699	13	.02	56793	99.42	732	4	.01	57032	99.83	785	4	.01	57103	99.96
700	19	.03	56812	99.45	733	6	.01	57038	99.84	786	2	.00	57105	99.96
701	12	.02	56824	99.47	735	1	.00	57039	99.85	787	1	.00	57106	99.96
702	5	.01	56829	99.48	736	2	.00	57041	99.85	789	1	.00	57107	99.96
703	9	.02	56838	99.49	737	5	.01	57046	99.86	790	1	.00	57108	99.97
704	9	.02	56847	99.51	738	3	.01	57049	99.86	791	1	.00	57109	99.97
705	9	.02	56856	99.53	739	1	.00	57050	99.87	794	1	.00	57110	99.97
706	12	.02	56868	99.55	740	1	.00	57051	99.87	800	1	.00	57111	99.97
707	10	.02	56878	99.56	741	2	.00	57053	99.87	804	1	.00	57112	99.97
708	6	.01	56884	99.57	742	2	.00	57055	99.87	809	1	.00	57113	99.98
709	2	.00	56886	99.58	743	4	.01	57059	99.88	816	1	.00	57114	99.98
710	7	.01	56893	99.59	744	2	.00	57061	99.88	822	2	.00	57116	99.98
711	8	.01	56901	99.60	745	1	.00	57062	99.89	832	3	.01	57119	99.99
712	4	.01	56905	99.61	746	1	.00	57063	99.89	843	5	.01	57124	99.99
713	10	.02	56915	99.63	747	3	.01	57066	99.89	860	3	.01	57127	100.00
714	4	.01	56919	99.64	748	1	.00	57067	99.89					

Figure 17. Mathematics 7 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 18. Reading 8 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
330	262	.46	262	0.46	396	2	.00	337	0.60	442	8	.01	511	0.90
332	1	.00	263	0.47	397	3	.01	340	0.60	443	6	.01	517	0.92
336	3	.01	266	0.47	398	1	.00	341	0.60	444	7	.01	524	0.93
337	3	.01	269	0.48	399	1	.00	342	0.61	445	5	.01	529	0.94
338	1	.00	270	0.48	400	2	.00	344	0.61	446	5	.01	534	0.95
339	2	.00	272	0.48	401	5	.01	349	0.62	447	5	.01	539	0.95
341	1	.00	273	0.48	402	1	.00	350	0.62	448	6	.01	545	0.96
344	1	.00	274	0.49	403	2	.00	352	0.62	449	5	.01	550	0.97
345	1	.00	275	0.49	405	5	.01	357	0.63	450	1	.00	551	0.98
351	1	.00	276	0.49	406	3	.01	360	0.64	451	11	.02	562	0.99
354	1	.00	277	0.49	407	2	.00	362	0.64	452	8	.01	570	1.01
356	1	.00	278	0.49	408	1	.00	363	0.64	453	8	.01	578	1.02
357	2	.00	280	0.50	409	4	.01	367	0.65	454	10	.02	588	1.04
358	2	.00	282	0.50	410	2	.00	369	0.65	455	6	.01	594	1.05
359	1	.00	283	0.50	411	1	.00	370	0.65	456	8	.01	602	1.07
360	1	.00	284	0.50	412	2	.00	372	0.66	457	15	.03	617	1.09
361	2	.00	286	0.51	413	1	.00	373	0.66	458	7	.01	624	1.10
363	2	.00	288	0.51	414	2	.00	375	0.66	459	7	.01	631	1.12
364	2	.00	290	0.51	415	5	.01	380	0.67	460	11	.02	642	1.14
367	2	.00	292	0.52	416	6	.01	386	0.68	461	4	.01	646	1.14
368	1	.00	293	0.52	417	5	.01	391	0.69	462	15	.03	661	1.17
369	1	.00	294	0.52	418	5	.01	396	0.70	463	12	.02	673	1.19
370	1	.00	295	0.52	420	2	.00	398	0.70	464	8	.01	681	1.21
371	3	.01	298	0.53	421	2	.00	400	0.71	465	9	.02	690	1.22
372	1	.00	299	0.53	422	3	.01	403	0.71	466	8	.01	698	1.24
373	1	.00	300	0.53	423	7	.01	410	0.73	467	10	.02	708	1.25
374	5	.01	305	0.54	424	2	.00	412	0.73	468	16	.03	724	1.28
375	1	.00	306	0.54	425	2	.00	414	0.73	469	6	.01	730	1.29
376	1	.00	307	0.54	426	3	.01	417	0.74	470	9	.02	739	1.31
377	4	.01	311	0.55	427	7	.01	424	0.75	471	17	.03	756	1.34
378	2	.00	313	0.55	428	5	.01	429	0.76	472	8	.01	764	1.35
379	1	.00	314	0.56	429	2	.00	431	0.76	473	16	.03	780	1.38
380	1	.00	315	0.56	430	3	.01	434	0.77	474	12	.02	792	1.40
381	1	.00	316	0.56	431	6	.01	440	0.78	475	16	.03	808	1.43
383	3	.01	319	0.56	432	5	.01	445	0.79	476	13	.02	821	1.45
384	2	.00	321	0.57	433	5	.01	450	0.80	477	15	.03	836	1.48
386	2	.00	323	0.57	434	5	.01	455	0.81	478	14	.02	850	1.50
387	2	.00	325	0.58	435	8	.01	463	0.82	479	26	.05	876	1.55
388	1	.00	326	0.58	436	9	.02	472	0.84	480	15	.03	891	1.58
389	2	.00	328	0.58	437	5	.01	477	0.84	481	13	.02	904	1.60
390	3	.01	331	0.59	438	8	.01	485	0.86	482	18	.03	922	1.63
393	1	.00	332	0.59	439	4	.01	489	0.87	483	10	.02	932	1.65
394	2	.00	334	0.59	440	4	.01	493	0.87	484	21	.04	953	1.69
395	1	.00	335	0.59	441	10	.02	503	0.89	485	9	.02	962	1.70

Appendix 18. Reading 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
486	13	.02	975	1.73	531	61	.11	2478	4.39	576	130	.23	6720	11.90
487	24	.04	999	1.77	532	53	.09	2531	4.48	577	148	.26	6868	12.16
488	14	.02	1013	1.79	533	57	.10	2588	4.58	578	158	.28	7026	12.44
489	25	.04	1038	1.84	534	57	.10	2645	4.68	579	160	.28	7186	12.72
490	18	.03	1056	1.87	535	52	.09	2697	4.77	580	144	.25	7330	12.98
491	17	.03	1073	1.90	536	59	.10	2756	4.88	581	160	.28	7490	13.26
492	22	.04	1095	1.94	537	49	.09	2805	4.97	582	159	.28	7649	13.54
493	27	.05	1122	1.99	538	55	.10	2860	5.06	583	176	.31	7825	13.85
494	18	.03	1140	2.02	539	58	.10	2918	5.17	584	161	.29	7986	14.14
495	29	.05	1169	2.07	540	69	.12	2987	5.29	585	172	.30	8158	14.44
496	25	.04	1194	2.11	541	50	.09	3037	5.38	586	175	.31	8333	14.75
497	18	.03	1212	2.15	542	76	.13	3113	5.51	587	179	.32	8512	15.07
498	19	.03	1231	2.18	543	60	.11	3173	5.62	588	152	.27	8664	15.34
499	19	.03	1250	2.21	544	79	.14	3252	5.76	589	188	.33	8852	15.67
500	25	.04	1275	2.26	545	84	.15	3336	5.91	590	195	.35	9047	16.01
501	22	.04	1297	2.30	546	86	.15	3422	6.06	591	192	.34	9239	16.35
502	32	.06	1329	2.35	547	84	.15	3506	6.21	592	204	.36	9443	16.72
503	27	.05	1356	2.40	548	90	.16	3596	6.37	593	199	.35	9642	17.07
504	29	.05	1385	2.45	549	77	.14	3673	6.50	594	185	.33	9827	17.40
505	32	.06	1417	2.51	550	91	.16	3764	6.66	595	182	.32	10009	17.72
506	31	.05	1448	2.56	551	96	.17	3860	6.83	596	192	.34	10201	18.06
507	26	.05	1474	2.61	552	96	.17	3956	7.00	597	200	.35	10401	18.41
508	26	.05	1500	2.66	553	80	.14	4036	7.14	598	235	.42	10636	18.83
509	36	.06	1536	2.72	554	91	.16	4127	7.31	599	218	.39	10854	19.21
510	33	.06	1569	2.78	555	105	.19	4232	7.49	600	226	.40	11080	19.61
511	32	.06	1601	2.83	556	106	.19	4338	7.68	601	209	.37	11289	19.98
512	34	.06	1635	2.89	557	97	.17	4435	7.85	602	232	.41	11521	20.39
513	29	.05	1664	2.95	558	88	.16	4523	8.01	603	249	.44	11770	20.84
514	33	.06	1697	3.00	559	86	.15	4609	8.16	604	228	.40	11998	21.24
515	31	.05	1728	3.06	560	110	.19	4719	8.35	605	251	.44	12249	21.68
516	45	.08	1773	3.14	561	90	.16	4809	8.51	606	221	.39	12470	22.07
517	28	.05	1801	3.19	562	110	.19	4919	8.71	607	247	.44	12717	22.51
518	44	.08	1845	3.27	563	106	.19	5025	8.90	608	241	.43	12958	22.94
519	42	.07	1887	3.34	564	129	.23	5154	9.12	609	269	.48	13227	23.41
520	46	.08	1933	3.42	565	120	.21	5274	9.34	610	286	.51	13513	23.92
521	31	.05	1964	3.48	566	115	.20	5389	9.54	611	263	.47	13776	24.39
522	44	.08	2008	3.55	567	124	.22	5513	9.76	612	270	.48	14046	24.86
523	48	.08	2056	3.64	568	118	.21	5631	9.97	613	262	.46	14308	25.33
524	56	.10	2112	3.74	569	143	.25	5774	10.22	614	287	.51	14595	25.84
525	44	.08	2156	3.82	570	115	.20	5889	10.42	615	260	.46	14855	26.30
526	45	.08	2201	3.90	571	146	.26	6035	10.68	616	262	.46	15117	26.76
527	53	.09	2254	3.99	572	135	.24	6170	10.92	617	258	.46	15375	27.22
528	57	.10	2311	4.09	573	146	.26	6316	11.18	618	298	.53	15673	27.74
529	59	.10	2370	4.20	574	138	.24	6454	11.42	619	288	.51	15961	28.25
530	47	.08	2417	4.28	575	136	.24	6590	11.67	620	277	.49	16238	28.74

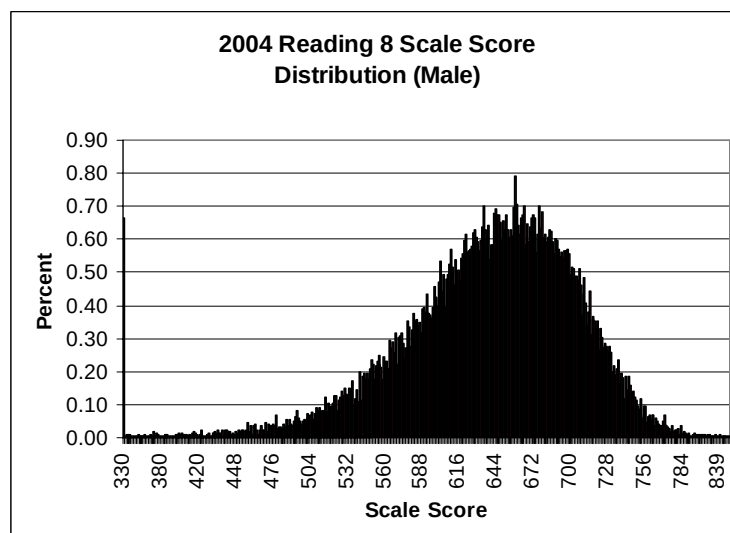
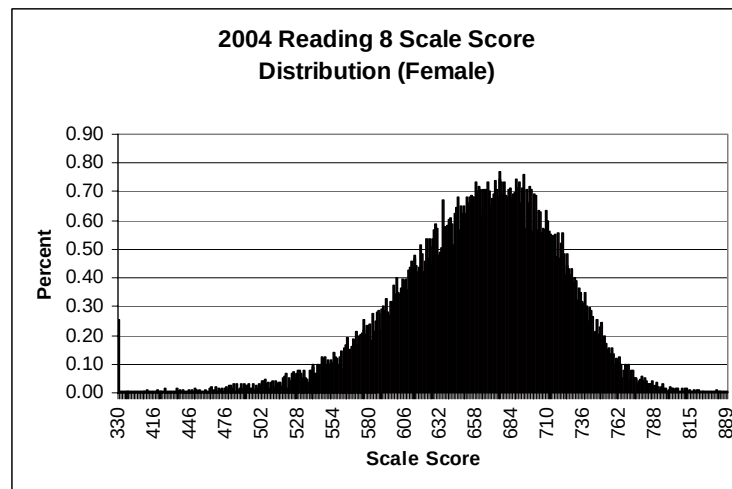
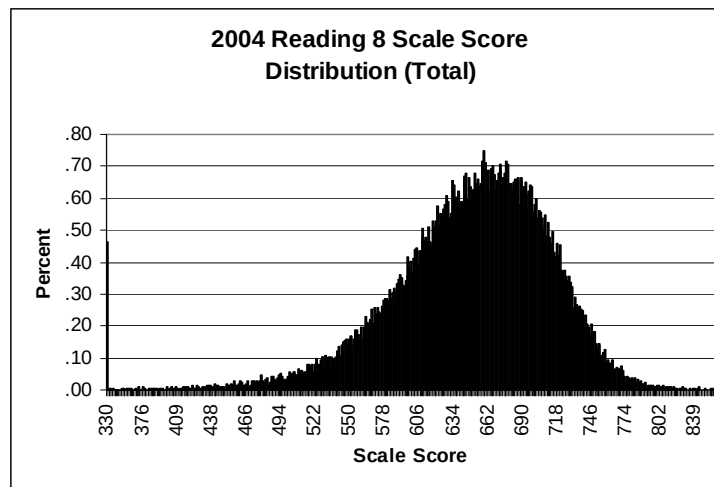
Appendix 18. Reading 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
621	299	.53	16537	29.27	666	397	.70	32293	57.16	711	295	.52	48034	85.03
622	326	.58	16863	29.85	667	371	.66	32664	57.82	712	269	.48	48303	85.51
623	292	.52	17155	30.37	668	380	.67	33044	58.49	713	242	.43	48545	85.93
624	311	.55	17466	30.92	669	352	.62	33396	59.12	714	260	.46	48805	86.39
625	288	.51	17754	31.43	670	371	.66	33767	59.77	715	279	.49	49084	86.89
626	315	.56	18069	31.99	671	383	.68	34150	60.45	716	243	.43	49327	87.32
627	320	.57	18389	32.55	672	400	.71	34550	61.16	717	234	.41	49561	87.73
628	329	.58	18718	33.13	673	387	.69	34937	61.85	718	260	.46	49821	88.19
629	344	.61	19062	33.74	674	361	.64	35298	62.48	719	231	.41	50052	88.60
630	333	.59	19395	34.33	675	375	.66	35673	63.15	720	239	.42	50291	89.02
631	303	.54	19698	34.87	676	383	.68	36056	63.83	721	256	.45	50547	89.48
632	298	.53	19996	35.40	677	405	.72	36461	64.54	722	211	.37	50758	89.85
633	311	.55	20307	35.95	678	374	.66	36835	65.21	723	208	.37	50966	90.22
634	369	.65	20676	36.60	679	399	.71	37234	65.91	724	210	.37	51176	90.59
635	361	.64	21037	37.24	680	365	.65	37599	66.56	725	211	.37	51387	90.96
636	341	.60	21378	37.84	681	365	.65	37964	67.20	726	201	.36	51588	91.32
637	322	.57	21700	38.41	682	354	.63	38318	67.83	727	192	.34	51780	91.66
638	332	.59	22032	39.00	683	368	.65	38686	68.48	728	200	.35	51980	92.01
639	352	.62	22384	39.62	684	364	.64	39050	69.13	729	183	.32	52163	92.34
640	323	.57	22707	40.20	685	372	.66	39422	69.78	730	189	.33	52352	92.67
641	332	.59	23039	40.78	686	373	.66	39795	70.44	731	183	.32	52535	93.00
642	311	.55	23350	41.33	687	376	.67	40171	71.11	732	146	.26	52681	93.26
643	369	.65	23719	41.99	688	328	.58	40499	71.69	733	163	.29	52844	93.54
644	378	.67	24097	42.66	689	370	.65	40869	72.35	734	151	.27	52995	93.81
645	383	.68	24480	43.33	690	374	.66	41243	73.01	735	141	.25	53136	94.06
646	337	.60	24817	43.93	691	346	.61	41589	73.62	736	146	.26	53282	94.32
647	374	.66	25191	44.59	692	360	.64	41949	74.26	737	149	.26	53431	94.58
648	360	.64	25551	45.23	693	368	.65	42317	74.91	738	143	.25	53574	94.84
649	352	.62	25903	45.85	694	320	.57	42637	75.48	739	139	.25	53713	95.08
650	348	.62	26251	46.47	695	351	.62	42988	76.10	740	121	.21	53834	95.30
651	354	.63	26605	47.10	696	345	.61	43333	76.71	741	116	.21	53950	95.50
652	384	.68	26989	47.78	697	362	.64	43695	77.35	742	132	.23	54082	95.74
653	364	.64	27353	48.42	698	360	.64	44055	77.99	743	115	.20	54197	95.94
654	363	.64	27716	49.06	699	315	.56	44370	78.54	744	111	.20	54308	96.14
655	372	.66	28088	49.72	700	327	.58	44697	79.12	745	98	.17	54406	96.31
656	359	.64	28447	50.36	701	308	.55	45005	79.67	746	117	.21	54523	96.52
657	365	.65	28812	51.00	702	339	.60	45344	80.27	747	95	.17	54618	96.68
658	404	.72	29216	51.72	703	305	.54	45649	80.81	748	103	.18	54721	96.87
659	422	.75	29638	52.46	704	317	.56	45966	81.37	749	102	.18	54823	97.05
660	401	.71	30039	53.17	705	315	.56	46281	81.93	750	82	.15	54905	97.19
661	381	.67	30420	53.85	706	291	.52	46572	82.44	751	74	.13	54979	97.32
662	345	.61	30765	54.46	707	305	.54	46877	82.98	752	79	.14	55058	97.46
663	388	.69	31153	55.15	708	281	.50	47158	83.48	753	81	.14	55139	97.61
664	352	.62	31505	55.77	709	309	.55	47467	84.03	754	62	.11	55201	97.72
665	391	.69	31896	56.46	710	272	.48	47739	84.51	755	60	.11	55261	97.82

Appendix 18. Reading 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
756	65	.12	55326	97.94	787	7	.01	56276	99.62	822	3	.01	56441	99.91
757	71	.13	55397	98.06	788	10	.02	56286	99.64	823	3	.01	56444	99.92
758	51	.09	55448	98.15	789	10	.02	56296	99.65	824	4	.01	56448	99.92
759	45	.08	55493	98.23	790	14	.02	56310	99.68	825	3	.01	56451	99.93
760	52	.09	55545	98.33	791	6	.01	56316	99.69	826	3	.01	56454	99.93
761	48	.08	55593	98.41	792	5	.01	56321	99.70	827	2	.00	56456	99.94
762	40	.07	55633	98.48	793	7	.01	56328	99.71	829	1	.00	56457	99.94
763	53	.09	55686	98.57	794	9	.02	56337	99.73	830	1	.00	56458	99.94
764	38	.07	55724	98.64	795	7	.01	56344	99.74	831	2	.00	56460	99.95
765	32	.06	55756	98.70	796	8	.01	56352	99.75	833	1	.00	56461	99.95
766	36	.06	55792	98.76	797	4	.01	56356	99.76	834	1	.00	56462	99.95
767	39	.07	55831	98.83	798	4	.01	56360	99.77	837	2	.00	56464	99.95
768	36	.06	55867	98.90	799	5	.01	56365	99.78	839	2	.00	56466	99.96
769	38	.07	55905	98.96	800	7	.01	56372	99.79	840	1	.00	56467	99.96
770	27	.05	55932	99.01	801	7	.01	56379	99.80	841	1	.00	56468	99.96
771	41	.07	55973	99.08	802	5	.01	56384	99.81	842	3	.01	56471	99.96
772	34	.06	56007	99.14	803	5	.01	56389	99.82	843	4	.01	56475	99.97
773	25	.04	56032	99.19	804	6	.01	56395	99.83	846	1	.00	56476	99.97
774	22	.04	56054	99.23	805	7	.01	56402	99.84	848	1	.00	56477	99.98
775	23	.04	56077	99.27	806	3	.01	56405	99.85	849	1	.00	56478	99.98
776	13	.02	56090	99.29	807	4	.01	56409	99.85	850	1	.00	56479	99.98
777	21	.04	56111	99.33	808	5	.01	56414	99.86	852	2	.00	56481	99.98
778	18	.03	56129	99.36	809	2	.00	56416	99.87	855	1	.00	56482	99.98
779	22	.04	56151	99.40	811	4	.01	56420	99.87	856	1	.00	56483	99.99
780	19	.03	56170	99.43	812	5	.01	56425	99.88	868	1	.00	56484	99.99
781	21	.04	56191	99.47	813	2	.00	56427	99.89	872	2	.00	56486	99.99
782	19	.03	56210	99.50	814	4	.01	56431	99.89	878	1	.00	56487	99.99
783	11	.02	56221	99.52	815	3	.01	56434	99.90	889	3	.01	56490	100.00
784	19	.03	56240	99.56	819	1	.00	56435	99.90	907	1	.00	56491	100.00
785	12	.02	56252	99.58	820	2	.00	56437	99.90					
786	17	.03	56269	99.61	821	1	.00	56438	99.91					

Figure 18. Reading 8 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 19. Writing 8 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
250	37	.07	37	0.07	325	3	.01	136	0.24	369	22	.04	589	1.04
253	1	.00	38	0.07	326	5	.01	141	0.25	370	19	.03	608	1.08
256	1	.00	39	0.07	327	2	.00	143	0.25	371	21	.04	629	1.12
257	1	.00	40	0.07	328	4	.01	147	0.26	372	15	.03	644	1.14
266	1	.00	41	0.07	329	7	.01	154	0.27	373	19	.03	663	1.18
271	2	.00	43	0.08	330	2	.00	156	0.28	374	27	.05	690	1.22
272	2	.00	45	0.08	331	2	.00	158	0.28	375	20	.04	710	1.26
275	1	.00	46	0.08	332	5	.01	163	0.29	376	26	.05	736	1.30
276	1	.00	47	0.08	333	5	.01	168	0.30	377	19	.03	755	1.34
277	4	.01	51	0.09	334	6	.01	174	0.31	378	29	.05	784	1.39
278	1	.00	52	0.09	335	3	.01	177	0.31	379	28	.05	812	1.44
279	2	.00	54	0.10	336	3	.01	180	0.32	380	25	.04	837	1.48
281	1	.00	55	0.10	337	4	.01	184	0.33	381	35	.06	872	1.55
283	2	.00	57	0.10	338	3	.01	187	0.33	382	33	.06	905	1.60
285	2	.00	59	0.10	339	3	.01	190	0.34	383	30	.05	935	1.66
290	1	.00	60	0.11	340	8	.01	198	0.35	384	28	.05	963	1.71
291	3	.01	63	0.11	341	5	.01	203	0.36	385	22	.04	985	1.75
294	1	.00	64	0.11	342	7	.01	210	0.37	386	26	.05	1011	1.79
295	2	.00	66	0.12	343	6	.01	216	0.38	387	25	.04	1036	1.84
300	2	.00	68	0.12	344	8	.01	224	0.40	388	27	.05	1063	1.88
301	1	.00	69	0.12	345	4	.01	228	0.40	389	23	.04	1086	1.93
302	2	.00	71	0.13	346	6	.01	234	0.41	390	28	.05	1114	1.97
303	2	.00	73	0.13	347	8	.01	242	0.43	391	33	.06	1147	2.03
304	3	.01	76	0.13	348	7	.01	249	0.44	392	32	.06	1179	2.09
305	1	.00	77	0.14	349	12	.02	261	0.46	393	34	.06	1213	2.15
306	1	.00	78	0.14	350	17	.03	278	0.49	394	41	.07	1254	2.22
307	4	.01	82	0.15	351	13	.02	291	0.52	395	40	.07	1294	2.29
308	3	.01	85	0.15	352	12	.02	303	0.54	396	38	.07	1332	2.36
309	2	.00	87	0.15	353	18	.03	321	0.57	397	41	.07	1373	2.43
310	2	.00	89	0.16	354	20	.04	341	0.60	398	36	.06	1409	2.50
311	2	.00	91	0.16	355	15	.03	356	0.63	399	36	.06	1445	2.56
312	4	.01	95	0.17	356	16	.03	372	0.66	400	44	.08	1489	2.64
313	5	.01	100	0.18	357	19	.03	391	0.69	401	32	.06	1521	2.70
314	1	.00	101	0.18	358	13	.02	404	0.72	402	31	.05	1552	2.75
315	2	.00	103	0.18	359	11	.02	415	0.74	403	35	.06	1587	2.81
316	2	.00	105	0.19	360	15	.03	430	0.76	404	44	.08	1631	2.89
317	2	.00	107	0.19	361	17	.03	447	0.79	405	43	.08	1674	2.97
318	2	.00	109	0.19	362	13	.02	460	0.82	406	43	.08	1717	3.04
319	4	.01	113	0.20	363	22	.04	482	0.85	407	43	.08	1760	3.12
320	5	.01	118	0.21	364	14	.02	496	0.88	408	46	.08	1806	3.20
321	4	.01	122	0.22	365	15	.03	511	0.91	409	61	.11	1867	3.31
322	1	.00	123	0.22	366	11	.02	522	0.93	410	43	.08	1910	3.39
323	3	.01	126	0.22	367	18	.03	540	0.96	411	60	.11	1970	3.49
324	7	.01	133	0.24	368	27	.05	567	1.01	412	50	.09	2020	3.58

Appendix 19. Writing 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
413	56	.10	2076	3.68	458	136	.24	6027	10.68	503	218	.39	13639	24.18
414	42	.07	2118	3.75	459	127	.23	6154	10.91	504	215	.38	13854	24.56
415	50	.09	2168	3.84	460	110	.20	6264	11.10	505	235	.42	14089	24.98
416	62	.11	2230	3.95	461	93	.16	6357	11.27	506	197	.35	14286	25.33
417	52	.09	2282	4.05	462	137	.24	6494	11.51	507	253	.45	14539	25.77
418	64	.11	2346	4.16	463	145	.26	6639	11.77	508	257	.46	14796	26.23
419	56	.10	2402	4.26	464	128	.23	6767	12.00	509	247	.44	15043	26.67
420	70	.12	2472	4.38	465	148	.26	6915	12.26	510	231	.41	15274	27.08
421	62	.11	2534	4.49	466	144	.26	7059	12.51	511	255	.45	15529	27.53
422	58	.10	2592	4.59	467	159	.28	7218	12.80	512	237	.42	15766	27.95
423	77	.14	2669	4.73	468	136	.24	7354	13.04	513	241	.43	16007	28.38
424	57	.10	2726	4.83	469	155	.27	7509	13.31	514	237	.42	16244	28.80
425	66	.12	2792	4.95	470	160	.28	7669	13.60	515	239	.42	16483	29.22
426	69	.12	2861	5.07	471	148	.26	7817	13.86	516	256	.45	16739	29.67
427	78	.14	2939	5.21	472	169	.30	7986	14.16	517	248	.44	16987	30.11
428	86	.15	3025	5.36	473	156	.28	8142	14.43	518	240	.43	17227	30.54
429	66	.12	3091	5.48	474	141	.25	8283	14.68	519	266	.47	17493	31.01
430	80	.14	3171	5.62	475	170	.30	8453	14.98	520	267	.47	17760	31.48
431	90	.16	3261	5.78	476	168	.30	8621	15.28	521	267	.47	18027	31.96
432	72	.13	3333	5.91	477	153	.27	8774	15.55	522	254	.45	18281	32.41
433	74	.13	3407	6.04	478	161	.29	8935	15.84	523	258	.46	18539	32.86
434	96	.17	3503	6.21	479	158	.28	9093	16.12	524	281	.50	18820	33.36
435	93	.16	3596	6.37	480	142	.25	9235	16.37	525	273	.48	19093	33.85
436	77	.14	3673	6.51	481	159	.28	9394	16.65	526	268	.48	19361	34.32
437	76	.13	3749	6.65	482	179	.32	9573	16.97	527	277	.49	19638	34.81
438	81	.14	3830	6.79	483	175	.31	9748	17.28	528	243	.43	19881	35.24
439	99	.18	3929	6.97	484	157	.28	9905	17.56	529	265	.47	20146	35.71
440	116	.21	4045	7.17	485	183	.32	10088	17.88	530	274	.49	20420	36.20
441	100	.18	4145	7.35	486	197	.35	10285	18.23	531	287	.51	20707	36.71
442	78	.14	4223	7.49	487	184	.33	10469	18.56	532	276	.49	20983	37.20
443	94	.17	4317	7.65	488	178	.32	10647	18.87	533	287	.51	21270	37.71
444	113	.20	4430	7.85	489	179	.32	10826	19.19	534	318	.56	21588	38.27
445	102	.18	4532	8.03	490	199	.35	11025	19.54	535	286	.51	21874	38.78
446	97	.17	4629	8.21	491	210	.37	11235	19.92	536	281	.50	22155	39.27
447	111	.20	4740	8.40	492	184	.33	11419	20.24	537	284	.50	22439	39.78
448	133	.24	4873	8.64	493	192	.34	11611	20.58	538	307	.54	22746	40.32
449	114	.20	4987	8.84	494	178	.32	11789	20.90	539	323	.57	23069	40.90
450	105	.19	5092	9.03	495	192	.34	11981	21.24	540	304	.54	23373	41.43
451	112	.20	5204	9.23	496	206	.37	12187	21.60	541	301	.53	23674	41.97
452	126	.22	5330	9.45	497	219	.39	12406	21.99	542	332	.59	24006	42.56
453	116	.21	5446	9.65	498	215	.38	12621	22.37	543	309	.55	24315	43.10
454	115	.20	5561	9.86	499	177	.31	12798	22.69	544	306	.54	24621	43.65
455	118	.21	5679	10.07	500	192	.34	12990	23.03	545	314	.56	24935	44.20
456	91	.16	5770	10.23	501	245	.43	13235	23.46	546	313	.55	25248	44.76
457	121	.21	5891	10.44	502	186	.33	13421	23.79	547	302	.54	25550	45.29

Appendix 19. Writing 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
548	334	.59	25884	45.89	593	310	.55	39820	70.59	638	147	.26	49881	88.43
549	329	.58	26213	46.47	594	243	.43	40063	71.02	639	162	.29	50043	88.71
550	322	.57	26535	47.04	595	285	.51	40348	71.53	640	154	.27	50197	88.99
551	310	.55	26845	47.59	596	322	.57	40670	72.10	641	167	.30	50364	89.28
552	325	.58	27170	48.17	597	279	.49	40949	72.59	642	152	.27	50516	89.55
553	286	.51	27456	48.67	598	267	.47	41216	73.07	643	136	.24	50652	89.79
554	335	.59	27791	49.27	599	303	.54	41519	73.60	644	151	.27	50803	90.06
555	306	.54	28097	49.81	600	291	.52	41810	74.12	645	139	.25	50942	90.31
556	269	.48	28366	50.29	601	284	.50	42094	74.62	646	143	.25	51085	90.56
557	322	.57	28688	50.86	602	275	.49	42369	75.11	647	132	.23	51217	90.79
558	313	.55	29001	51.41	603	244	.43	42613	75.54	648	156	.28	51373	91.07
559	308	.55	29309	51.96	604	279	.49	42892	76.04	649	128	.23	51501	91.30
560	293	.52	29602	52.48	605	283	.50	43175	76.54	650	125	.22	51626	91.52
561	335	.59	29937	53.07	606	247	.44	43422	76.98	651	124	.22	51750	91.74
562	329	.58	30266	53.65	607	215	.38	43637	77.36	652	109	.19	51859	91.93
563	293	.52	30559	54.17	608	231	.41	43868	77.77	653	109	.19	51968	92.13
564	311	.55	30870	54.72	609	266	.47	44134	78.24	654	102	.18	52070	92.31
565	304	.54	31174	55.26	610	235	.42	44369	78.65	655	99	.18	52169	92.48
566	308	.55	31482	55.81	611	239	.42	44608	79.08	656	97	.17	52266	92.65
567	299	.53	31781	56.34	612	226	.40	44834	79.48	657	97	.17	52363	92.83
568	315	.56	32096	56.90	613	246	.44	45080	79.91	658	105	.19	52468	93.01
569	318	.56	32414	57.46	614	226	.40	45306	80.32	659	93	.16	52561	93.18
570	328	.58	32742	58.04	615	206	.37	45512	80.68	660	102	.18	52663	93.36
571	309	.55	33051	58.59	616	233	.41	45745	81.09	661	96	.17	52759	93.53
572	314	.56	33365	59.15	617	225	.40	45970	81.49	662	100	.18	52859	93.71
573	336	.60	33701	59.74	618	196	.35	46166	81.84	663	111	.20	52970	93.90
574	336	.60	34037	60.34	619	212	.38	46378	82.22	664	69	.12	53039	94.02
575	316	.56	34353	60.90	620	226	.40	46604	82.62	665	82	.15	53121	94.17
576	321	.57	34674	61.47	621	206	.37	46810	82.98	666	105	.19	53226	94.36
577	318	.56	34992	62.03	622	218	.39	47028	83.37	667	87	.15	53313	94.51
578	306	.54	35298	62.57	623	196	.35	47224	83.72	668	86	.15	53399	94.66
579	295	.52	35593	63.10	624	210	.37	47434	84.09	669	81	.14	53480	94.81
580	299	.53	35892	63.63	625	177	.31	47611	84.40	670	89	.16	53569	94.96
581	300	.53	36192	64.16	626	195	.35	47806	84.75	671	81	.14	53650	95.11
582	311	.55	36503	64.71	627	199	.35	48005	85.10	672	88	.16	53738	95.26
583	328	.58	36831	65.29	628	181	.32	48186	85.42	673	66	.12	53804	95.38
584	311	.55	37142	65.84	629	189	.34	48375	85.76	674	60	.11	53864	95.49
585	302	.54	37444	66.38	630	172	.30	48547	86.06	675	67	.12	53931	95.61
586	296	.52	37740	66.90	631	168	.30	48715	86.36	676	57	.10	53988	95.71
587	319	.57	38059	67.47	632	177	.31	48892	86.67	677	56	.10	54044	95.81
588	273	.48	38332	67.95	633	166	.29	49058	86.97	678	74	.13	54118	95.94
589	301	.53	38633	68.49	634	164	.29	49222	87.26	679	62	.11	54180	96.05
590	282	.50	38915	68.99	635	173	.31	49395	87.56	680	62	.11	54242	96.16
591	277	.49	39192	69.48	636	177	.31	49572	87.88	681	61	.11	54303	96.26
592	318	.56	39510	70.04	637	162	.29	49734	88.17	682	52	.09	54355	96.36

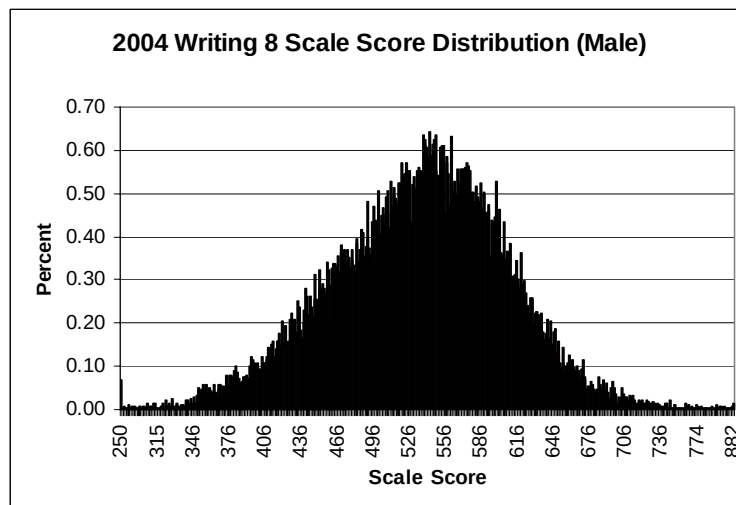
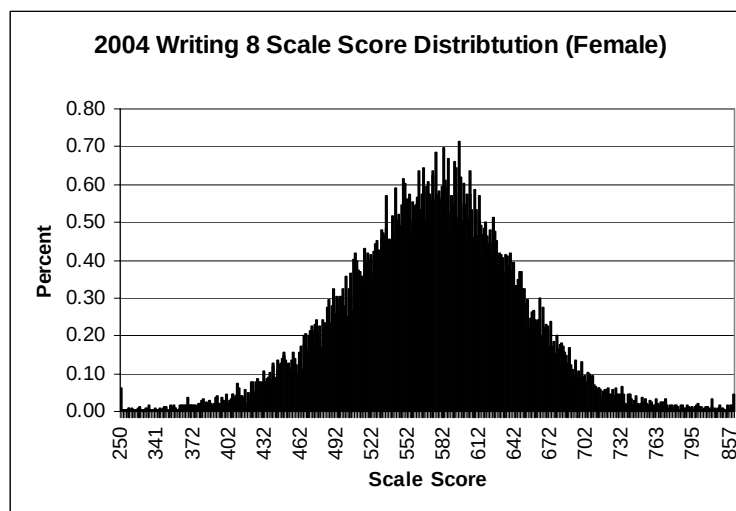
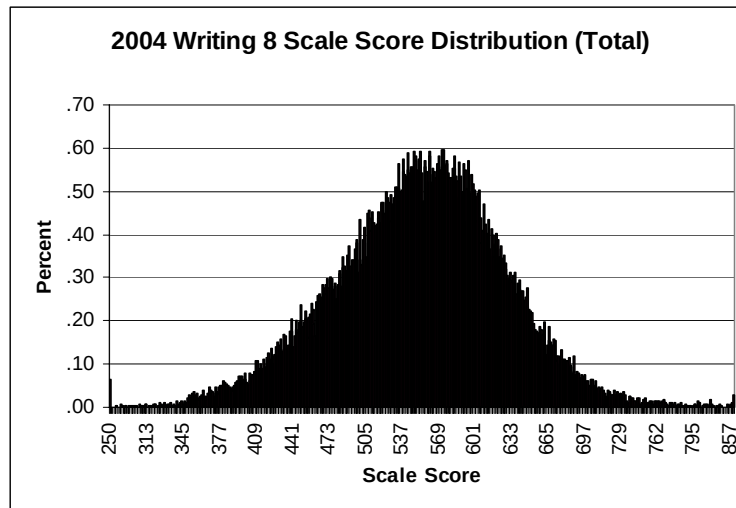
Appendix 19. Writing 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
683	60	.11	54415	96.46	728	16	.03	55825	98.96	774	7	.01	56219	99.66
684	65	.12	54480	96.58	729	18	.03	55843	98.99	775	6	.01	56225	99.67
685	55	.10	54535	96.68	730	9	.02	55852	99.01	776	3	.01	56228	99.68
686	52	.09	54587	96.77	731	16	.03	55868	99.04	777	5	.01	56233	99.69
687	45	.08	54632	96.85	732	21	.04	55889	99.08	778	6	.01	56239	99.70
688	66	.12	54698	96.97	733	17	.03	55906	99.11	779	2	.00	56241	99.70
689	46	.08	54744	97.05	734	9	.02	55915	99.12	780	4	.01	56245	99.71
690	42	.07	54786	97.12	735	7	.01	55922	99.13	781	1	.00	56246	99.71
691	47	.08	54833	97.20	736	7	.01	55929	99.15	782	5	.01	56251	99.72
692	36	.06	54869	97.27	737	14	.02	55943	99.17	784	1	.00	56252	99.72
693	44	.08	54913	97.35	738	15	.03	55958	99.20	785	6	.01	56258	99.73
694	38	.07	54951	97.41	739	13	.02	55971	99.22	786	3	.01	56261	99.74
695	43	.08	54994	97.49	740	13	.02	55984	99.24	787	2	.00	56263	99.74
696	41	.07	55035	97.56	741	9	.02	55993	99.26	788	3	.01	56266	99.74
697	39	.07	55074	97.63	742	9	.02	56002	99.28	789	5	.01	56271	99.75
698	43	.08	55117	97.71	743	2	.00	56004	99.28	790	3	.01	56274	99.76
699	35	.06	55152	97.77	744	12	.02	56016	99.30	791	3	.01	56277	99.76
700	29	.05	55181	97.82	745	12	.02	56028	99.32	792	3	.01	56280	99.77
701	34	.06	55215	97.88	746	5	.01	56033	99.33	793	2	.00	56282	99.77
702	28	.05	55243	97.93	747	4	.01	56037	99.34	794	1	.00	56283	99.77
703	36	.06	55279	98.00	748	6	.01	56043	99.35	795	2	.00	56285	99.78
704	33	.06	55312	98.05	749	11	.02	56054	99.37	797	5	.01	56290	99.79
705	37	.07	55349	98.12	750	10	.02	56064	99.39	798	5	.01	56295	99.80
706	29	.05	55378	98.17	751	12	.02	56076	99.41	799	2	.00	56297	99.80
707	34	.06	55412	98.23	752	5	.01	56081	99.42	801	8	.01	56305	99.81
708	26	.05	55438	98.28	753	7	.01	56088	99.43	802	6	.01	56311	99.82
709	25	.04	55463	98.32	754	6	.01	56094	99.44	804	3	.01	56314	99.83
710	27	.05	55490	98.37	755	9	.02	56103	99.46	806	1	.00	56315	99.83
711	19	.03	55509	98.40	756	6	.01	56109	99.47	808	1	.00	56316	99.83
712	25	.04	55534	98.45	757	8	.01	56117	99.48	809	2	.00	56318	99.84
713	26	.05	55560	98.49	758	4	.01	56121	99.49	810	4	.01	56322	99.84
714	22	.04	55582	98.53	760	9	.02	56130	99.50	811	5	.01	56327	99.85
715	11	.02	55593	98.55	761	5	.01	56135	99.51	812	5	.01	56332	99.86
716	19	.03	55612	98.59	762	9	.02	56144	99.53	814	2	.00	56334	99.87
717	15	.03	55627	98.61	763	8	.01	56152	99.54	815	1	.00	56335	99.87
718	22	.04	55649	98.65	764	8	.01	56160	99.56	818	10	.02	56345	99.88
719	21	.04	55670	98.69	765	7	.01	56167	99.57	824	4	.01	56349	99.89
720	18	.03	55688	98.72	766	2	.00	56169	99.57	825	3	.01	56352	99.90
721	17	.03	55705	98.75	767	8	.01	56177	99.59	827	3	.01	56355	99.90
722	17	.03	55722	98.78	768	9	.02	56186	99.60	828	1	.00	56356	99.90
723	16	.03	55738	98.81	769	10	.02	56196	99.62	829	2	.00	56358	99.91
724	22	.04	55760	98.85	770	7	.01	56203	99.63	831	1	.00	56359	99.91
725	16	.03	55776	98.88	771	4	.01	56207	99.64	832	2	.00	56361	99.91
726	12	.02	55788	98.90	772	3	.01	56210	99.65	833	4	.01	56365	99.92
727	21	.04	55809	98.93	773	2	.00	56212	99.65	834	2	.00	56367	99.92

Appendix 19. Writing 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
837	3	.01	56370	99.93	847	1	.00	56374	99.94	861	5	.01	56387	99.96
838	1	.00	56371	99.93	848	5	.01	56379	99.95	882	6	.01	56393	99.97
842	1	.00	56372	99.93	851	2	.00	56381	99.95	898	1	.00	56394	99.97
845	1	.00	56373	99.93	857	1	.00	56382	99.95	910	16	.03	56410	100.00

Figure 19. Writing 8 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 20. Mathematics 8 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
310	515	.91	515	0.91	354	14	.02	979	1.73	398	26	.05	2000	3.53
311	13	.02	528	0.93	355	21	.04	1000	1.77	399	37	.07	2037	3.60
312	5	.01	533	0.94	356	14	.02	1014	1.79	400	26	.05	2063	3.64
313	5	.01	538	0.95	357	14	.02	1028	1.82	401	20	.04	2083	3.68
314	8	.01	546	0.96	358	12	.02	1040	1.84	402	41	.07	2124	3.75
315	6	.01	552	0.97	359	15	.03	1055	1.86	403	35	.06	2159	3.81
316	4	.01	556	0.98	360	20	.04	1075	1.90	404	39	.07	2198	3.88
317	10	.02	566	1.00	361	11	.02	1086	1.92	405	27	.05	2225	3.93
318	5	.01	571	1.01	362	16	.03	1102	1.95	406	45	.08	2270	4.01
319	4	.01	575	1.02	363	18	.03	1120	1.98	407	53	.09	2323	4.10
320	7	.01	582	1.03	364	22	.04	1142	2.02	408	49	.09	2372	4.19
321	14	.02	596	1.05	365	26	.05	1168	2.06	409	40	.07	2412	4.26
322	5	.01	601	1.06	366	17	.03	1185	2.09	410	34	.06	2446	4.32
323	11	.02	612	1.08	367	13	.02	1198	2.12	411	38	.07	2484	4.39
324	10	.02	622	1.10	368	27	.05	1225	2.16	412	39	.07	2523	4.46
325	10	.02	632	1.12	369	17	.03	1242	2.19	413	33	.06	2556	4.51
326	7	.01	639	1.13	370	26	.05	1268	2.24	414	44	.08	2600	4.59
327	5	.01	644	1.14	371	14	.02	1282	2.26	415	37	.07	2637	4.66
328	8	.01	652	1.15	372	22	.04	1304	2.30	416	42	.07	2679	4.73
329	14	.02	666	1.18	373	30	.05	1334	2.36	417	49	.09	2728	4.82
330	4	.01	670	1.18	374	20	.04	1354	2.39	418	60	.11	2788	4.92
331	5	.01	675	1.19	375	20	.04	1374	2.43	419	53	.09	2841	5.02
332	9	.02	684	1.21	376	23	.04	1397	2.47	420	63	.11	2904	5.13
333	15	.03	699	1.23	377	18	.03	1415	2.50	421	45	.08	2949	5.21
334	10	.02	709	1.25	378	24	.04	1439	2.54	422	49	.09	2998	5.29
335	16	.03	725	1.28	379	20	.04	1459	2.58	423	65	.11	3063	5.41
336	9	.02	734	1.30	380	25	.04	1484	2.62	424	55	.10	3118	5.51
337	11	.02	745	1.32	381	25	.04	1509	2.66	425	63	.11	3181	5.62
338	12	.02	757	1.34	382	26	.05	1535	2.71	426	65	.11	3246	5.73
339	9	.02	766	1.35	383	19	.03	1554	2.74	427	54	.10	3300	5.83
340	8	.01	774	1.37	384	20	.04	1574	2.78	428	55	.10	3355	5.92
341	15	.03	789	1.39	385	27	.05	1601	2.83	429	63	.11	3418	6.04
342	15	.03	804	1.42	386	23	.04	1624	2.87	430	54	.10	3472	6.13
343	17	.03	821	1.45	387	35	.06	1659	2.93	431	80	.14	3552	6.27
344	12	.02	833	1.47	388	29	.05	1688	2.98	432	74	.13	3626	6.40
345	10	.02	843	1.49	389	31	.05	1719	3.04	433	70	.12	3696	6.53
346	15	.03	858	1.52	390	29	.05	1748	3.09	434	59	.10	3755	6.63
347	14	.02	872	1.54	391	31	.05	1779	3.14	435	90	.16	3845	6.79
348	13	.02	885	1.56	392	28	.05	1807	3.19	436	66	.12	3911	6.91
349	16	.03	901	1.59	393	30	.05	1837	3.24	437	75	.13	3986	7.04
350	11	.02	912	1.61	394	37	.07	1874	3.31	438	71	.13	4057	7.16
351	17	.03	929	1.64	395	22	.04	1896	3.35	439	79	.14	4136	7.30
352	17	.03	946	1.67	396	35	.06	1931	3.41	440	79	.14	4215	7.44
353	19	.03	965	1.70	397	43	.08	1974	3.49	441	82	.14	4297	7.59

Appendix 20. Mathematics 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
442	68	.12	4365	7.71	487	150	.26	9502	16.78	532	259	.46	19181	33.87
443	90	.16	4455	7.87	488	163	.29	9665	17.07	533	273	.48	19454	34.35
444	71	.13	4526	7.99	489	169	.30	9834	17.37	534	291	.51	19745	34.87
445	98	.17	4624	8.17	490	157	.28	9991	17.64	535	310	.55	20055	35.41
446	90	.16	4714	8.32	491	151	.27	10142	17.91	536	305	.54	20360	35.95
447	98	.17	4812	8.50	492	177	.31	10319	18.22	537	306	.54	20666	36.49
448	89	.16	4901	8.65	493	152	.27	10471	18.49	538	295	.52	20961	37.01
449	81	.14	4982	8.80	494	158	.28	10629	18.77	539	278	.49	21239	37.51
450	105	.19	5087	8.98	495	171	.30	10800	19.07	540	287	.51	21526	38.01
451	100	.18	5187	9.16	496	191	.34	10991	19.41	541	318	.56	21844	38.57
452	86	.15	5273	9.31	497	186	.33	11177	19.74	542	288	.51	22132	39.08
453	98	.17	5371	9.48	498	172	.30	11349	20.04	543	304	.54	22436	39.62
454	86	.15	5457	9.64	499	156	.28	11505	20.32	544	283	.50	22719	40.12
455	97	.17	5554	9.81	500	187	.33	11692	20.65	545	307	.54	23026	40.66
456	95	.17	5649	9.98	501	187	.33	11879	20.98	546	284	.50	23310	41.16
457	116	.20	5765	10.18	502	189	.33	12068	21.31	547	327	.58	23637	41.74
458	94	.17	5859	10.35	503	214	.38	12282	21.69	548	296	.52	23933	42.26
459	84	.15	5943	10.49	504	197	.35	12479	22.04	549	337	.60	24270	42.86
460	127	.22	6070	10.72	505	200	.35	12679	22.39	550	332	.59	24602	43.44
461	109	.19	6179	10.91	506	196	.35	12875	22.74	551	339	.60	24941	44.04
462	96	.17	6275	11.08	507	220	.39	13095	23.12	552	340	.60	25281	44.64
463	107	.19	6382	11.27	508	205	.36	13300	23.49	553	311	.55	25592	45.19
464	113	.20	6495	11.47	509	230	.41	13530	23.89	554	328	.58	25920	45.77
465	108	.19	6603	11.66	510	208	.37	13738	24.26	555	288	.51	26208	46.28
466	111	.20	6714	11.86	511	207	.37	13945	24.63	556	296	.52	26504	46.80
467	111	.20	6825	12.05	512	197	.35	14142	24.97	557	317	.56	26821	47.36
468	105	.19	6930	12.24	513	216	.38	14358	25.35	558	317	.56	27138	47.92
469	112	.20	7042	12.44	514	219	.39	14577	25.74	559	328	.58	27466	48.50
470	119	.21	7161	12.65	515	235	.41	14812	26.16	560	298	.53	27764	49.03
471	127	.22	7288	12.87	516	218	.38	15030	26.54	561	331	.58	28095	49.61
472	124	.22	7412	13.09	517	261	.46	15291	27.00	562	318	.56	28413	50.17
473	138	.24	7550	13.33	518	255	.45	15546	27.45	563	361	.64	28774	50.81
474	123	.22	7673	13.55	519	257	.45	15803	27.91	564	330	.58	29104	51.39
475	132	.23	7805	13.78	520	266	.47	16069	28.38	565	333	.59	29437	51.98
476	142	.25	7947	14.03	521	255	.45	16324	28.83	566	341	.60	29778	52.58
477	114	.20	8061	14.23	522	267	.47	16591	29.30	567	331	.58	30109	53.17
478	146	.26	8207	14.49	523	262	.46	16853	29.76	568	335	.59	30444	53.76
479	142	.25	8349	14.74	524	238	.42	17091	30.18	569	324	.57	30768	54.33
480	135	.24	8484	14.98	525	254	.45	17345	30.63	570	268	.47	31036	54.81
481	134	.24	8618	15.22	526	258	.46	17603	31.08	571	321	.57	31357	55.37
482	141	.25	8759	15.47	527	258	.46	17861	31.54	572	324	.57	31681	55.94
483	148	.26	8907	15.73	528	270	.48	18131	32.02	573	327	.58	32008	56.52
484	132	.23	9039	15.96	529	261	.46	18392	32.48	574	321	.57	32329	57.09
485	147	.26	9186	16.22	530	252	.45	18644	32.92	575	327	.58	32656	57.67
486	166	.29	9352	16.51	531	278	.49	18922	33.41	576	300	.53	32956	58.20

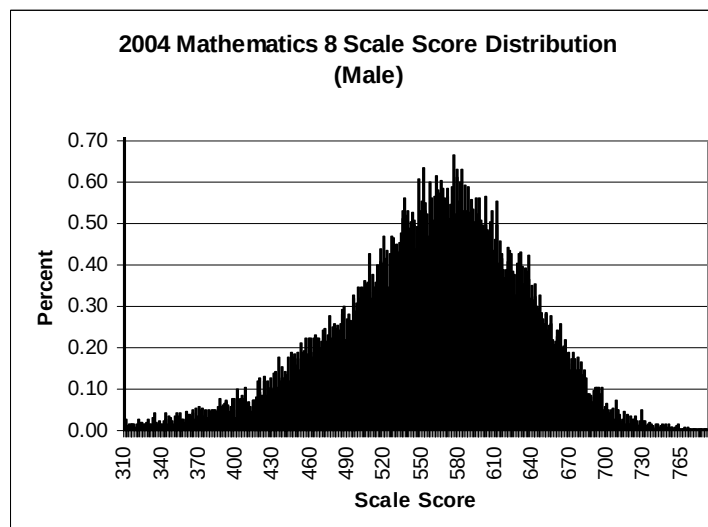
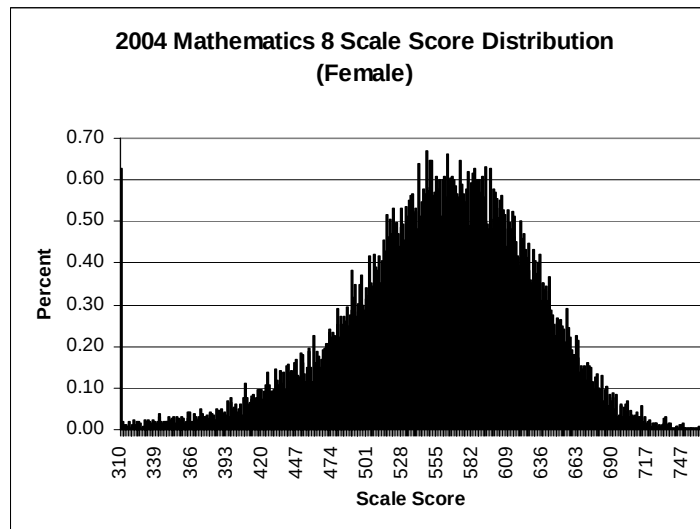
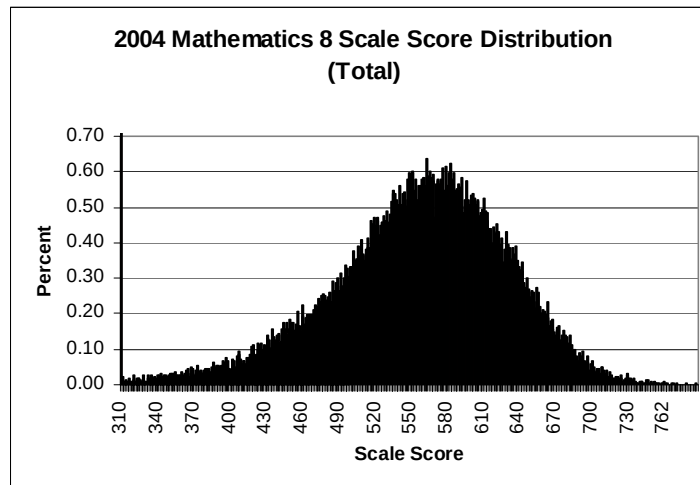
Appendix 20. Mathematics 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
577	345	.61	33301	58.81	622	256	.45	46417	81.97	667	103	.18	53970	95.30
578	311	.55	33612	59.35	623	243	.43	46660	82.40	668	89	.16	54059	95.46
579	349	.62	33961	59.97	624	223	.39	46883	82.79	669	85	.15	54144	95.61
580	318	.56	34279	60.53	625	235	.41	47118	83.20	670	80	.14	54224	95.75
581	318	.56	34597	61.09	626	215	.38	47333	83.58	671	87	.15	54311	95.91
582	337	.60	34934	61.69	627	195	.34	47528	83.93	672	92	.16	54403	96.07
583	354	.63	35288	62.31	628	215	.38	47743	84.31	673	95	.17	54498	96.24
584	327	.58	35615	62.89	629	244	.43	47987	84.74	674	70	.12	54568	96.36
585	314	.55	35929	63.45	630	223	.39	48210	85.13	675	80	.14	54648	96.50
586	337	.60	36266	64.04	631	213	.38	48423	85.51	676	68	.12	54716	96.62
587	311	.55	36577	64.59	632	219	.39	48642	85.90	677	86	.15	54802	96.77
588	312	.55	36889	65.14	633	199	.35	48841	86.25	678	79	.14	54881	96.91
589	304	.54	37193	65.68	634	219	.39	49060	86.63	679	62	.11	54943	97.02
590	320	.57	37513	66.24	635	200	.35	49260	86.99	680	76	.13	55019	97.16
591	316	.56	37829	66.80	636	208	.37	49468	87.35	681	66	.12	55085	97.27
592	330	.58	38159	67.38	637	220	.39	49688	87.74	682	78	.14	55163	97.41
593	285	.50	38444	67.89	638	199	.35	49887	88.09	683	50	.09	55213	97.50
594	275	.49	38719	68.37	639	187	.33	50074	88.42	684	64	.11	55277	97.61
595	296	.52	39015	68.90	640	187	.33	50261	88.75	685	55	.10	55332	97.71
596	325	.57	39340	69.47	641	183	.32	50444	89.08	686	55	.10	55387	97.81
597	296	.52	39636	69.99	642	196	.35	50640	89.42	687	39	.07	55426	97.88
598	295	.52	39931	70.51	643	181	.32	50821	89.74	688	47	.08	55473	97.96
599	287	.51	40218	71.02	644	163	.29	50984	90.03	689	39	.07	55512	98.03
600	302	.53	40520	71.55	645	156	.28	51140	90.31	690	52	.09	55564	98.12
601	294	.52	40814	72.07	646	135	.24	51275	90.55	691	46	.08	55610	98.20
602	304	.54	41118	72.61	647	169	.30	51444	90.84	692	44	.08	55654	98.28
603	297	.52	41415	73.13	648	153	.27	51597	91.11	693	53	.09	55707	98.37
604	287	.51	41702	73.64	649	139	.25	51736	91.36	694	38	.07	55745	98.44
605	295	.52	41997	74.16	650	147	.26	51883	91.62	695	36	.06	55781	98.50
606	292	.52	42289	74.68	651	151	.27	52034	91.89	696	35	.06	55816	98.56
607	270	.48	42559	75.15	652	148	.26	52182	92.15	697	47	.08	55863	98.65
608	275	.49	42834	75.64	653	121	.21	52303	92.36	698	23	.04	55886	98.69
609	260	.46	43094	76.10	654	131	.23	52434	92.59	699	32	.06	55918	98.74
610	279	.49	43373	76.59	655	154	.27	52588	92.86	700	30	.05	55948	98.80
611	298	.53	43671	77.12	656	148	.26	52736	93.13	701	38	.07	55986	98.86
612	276	.49	43947	77.61	657	124	.22	52860	93.34	702	27	.05	56013	98.91
613	262	.46	44209	78.07	658	110	.19	52970	93.54	703	21	.04	56034	98.95
614	274	.48	44483	78.55	659	115	.20	53085	93.74	704	22	.04	56056	98.99
615	248	.44	44731	78.99	660	120	.21	53205	93.95	705	25	.04	56081	99.03
616	249	.44	44980	79.43	661	116	.20	53321	94.16	706	25	.04	56106	99.08
617	227	.40	45207	79.83	662	113	.20	53434	94.36	707	18	.03	56124	99.11
618	216	.38	45423	80.21	663	133	.23	53567	94.59	708	29	.05	56153	99.16
619	251	.44	45674	80.65	664	106	.19	53673	94.78	709	27	.05	56180	99.21
620	242	.43	45916	81.08	665	93	.16	53766	94.94	710	23	.04	56203	99.25
621	245	.43	46161	81.51	666	101	.18	53867	95.12	711	19	.03	56222	99.28

Appendix 20. Mathematics 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
712	11	.02	56233	99.30	738	3	.01	56514	99.80	769	1	.00	56598	99.95
713	24	.04	56257	99.34	739	2	.00	56516	99.80	772	1	.00	56599	99.95
714	12	.02	56269	99.36	740	6	.01	56522	99.81	775	3	.01	56602	99.95
715	21	.04	56290	99.40	741	4	.01	56526	99.82	776	1	.00	56603	99.95
716	9	.02	56299	99.42	742	4	.01	56530	99.83	777	3	.01	56606	99.96
717	16	.03	56315	99.45	743	2	.00	56532	99.83	778	1	.00	56607	99.96
718	11	.02	56326	99.46	744	3	.01	56535	99.83	780	1	.00	56608	99.96
719	9	.02	56335	99.48	745	6	.01	56541	99.84	781	2	.00	56610	99.97
720	12	.02	56347	99.50	746	7	.01	56548	99.86	782	1	.00	56611	99.97
721	12	.02	56359	99.52	747	7	.01	56555	99.87	783	1	.00	56612	99.97
722	12	.02	56371	99.54	748	3	.01	56558	99.87	791	1	.00	56613	99.97
723	11	.02	56382	99.56	749	5	.01	56563	99.88	794	1	.00	56614	99.97
724	14	.02	56396	99.59	750	2	.00	56565	99.89	795	1	.00	56615	99.98
725	9	.02	56405	99.60	751	1	.00	56566	99.89	797	1	.00	56616	99.98
726	6	.01	56411	99.62	752	5	.01	56571	99.90	798	1	.00	56617	99.98
727	7	.01	56418	99.63	753	2	.00	56573	99.90	799	2	.00	56619	99.98
728	10	.02	56428	99.65	754	2	.00	56575	99.90	802	1	.00	56620	99.98
729	18	.03	56446	99.68	755	3	.01	56578	99.91	815	1	.00	56621	99.99
730	14	.02	56460	99.70	756	2	.00	56580	99.91	821	1	.00	56622	99.99
731	11	.02	56471	99.72	758	1	.00	56581	99.92	825	1	.00	56623	99.99
732	10	.02	56481	99.74	759	2	.00	56583	99.92	829	1	.00	56624	99.99
733	7	.01	56488	99.75	760	3	.01	56586	99.92	833	1	.00	56625	99.99
734	5	.01	56493	99.76	762	5	.01	56591	99.93	837	2	.00	56627	100.00
735	10	.02	56503	99.78	764	3	.01	56594	99.94	841	1	.00	56628	100.00
736	5	.01	56508	99.79	765	2	.00	56596	99.94	890	1	.00	56629	100.00
737	3	.01	56511	99.79	766	1	.00	56597	99.94					

Figure 20. Mathematics 8 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 21. Science 8 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
300	517	.91	517	0.91	344	27	.05	1183	2.09	388	61	.11	3169	5.60
301	5	.01	522	0.92	345	19	.03	1202	2.13	389	63	.11	3232	5.72
302	9	.02	531	0.94	346	27	.05	1229	2.17	390	77	.14	3309	5.85
303	7	.01	538	0.95	347	23	.04	1252	2.21	391	85	.15	3394	6.00
304	14	.02	552	0.98	348	20	.04	1272	2.25	392	78	.14	3472	6.14
305	6	.01	558	0.99	349	35	.06	1307	2.31	393	70	.12	3542	6.26
306	6	.01	564	1.00	350	33	.06	1340	2.37	394	78	.14	3620	6.40
307	6	.01	570	1.01	351	30	.05	1370	2.42	395	90	.16	3710	6.56
308	4	.01	574	1.01	352	38	.07	1408	2.49	396	73	.13	3783	6.69
309	9	.02	583	1.03	353	29	.05	1437	2.54	397	76	.13	3859	6.82
310	5	.01	588	1.04	354	33	.06	1470	2.60	398	80	.14	3939	6.97
311	16	.03	604	1.07	355	28	.05	1498	2.65	399	75	.13	4014	7.10
312	13	.02	617	1.09	356	38	.07	1536	2.72	400	85	.15	4099	7.25
313	8	.01	625	1.11	357	35	.06	1571	2.78	401	75	.13	4174	7.38
314	3	.01	628	1.11	358	37	.07	1608	2.84	402	87	.15	4261	7.53
315	11	.02	639	1.13	359	36	.06	1644	2.91	403	76	.13	4337	7.67
316	9	.02	648	1.15	360	38	.07	1682	2.97	404	85	.15	4422	7.82
317	14	.02	662	1.17	361	36	.06	1718	3.04	405	77	.14	4499	7.96
318	14	.02	676	1.20	362	44	.08	1762	3.12	406	109	.19	4608	8.15
319	10	.02	686	1.21	363	42	.07	1804	3.19	407	99	.18	4707	8.32
320	17	.03	703	1.24	364	50	.09	1854	3.28	408	93	.16	4800	8.49
321	17	.03	720	1.27	365	32	.06	1886	3.33	409	98	.17	4898	8.66
322	14	.02	734	1.30	366	52	.09	1938	3.43	410	105	.19	5003	8.85
323	14	.02	748	1.32	367	41	.07	1979	3.50	411	94	.17	5097	9.01
324	14	.02	762	1.35	368	43	.08	2022	3.58	412	94	.17	5191	9.18
325	21	.04	783	1.38	369	53	.09	2075	3.67	413	114	.20	5305	9.38
326	29	.05	812	1.44	370	53	.09	2128	3.76	414	107	.19	5412	9.57
327	17	.03	829	1.47	371	56	.10	2184	3.86	415	104	.18	5516	9.75
328	16	.03	845	1.49	372	42	.07	2226	3.94	416	127	.22	5643	9.98
329	23	.04	868	1.53	373	45	.08	2271	4.02	417	114	.20	5757	10.18
330	12	.02	880	1.56	374	53	.09	2324	4.11	418	106	.19	5863	10.37
331	22	.04	902	1.59	375	65	.11	2389	4.22	419	129	.23	5992	10.60
332	25	.04	927	1.64	376	65	.11	2454	4.34	420	109	.19	6101	10.79
333	10	.02	937	1.66	377	50	.09	2504	4.43	421	112	.20	6213	10.99
334	20	.04	957	1.69	378	64	.11	2568	4.54	422	125	.22	6338	11.21
335	25	.04	982	1.74	379	50	.09	2618	4.63	423	125	.22	6463	11.43
336	18	.03	1000	1.77	380	53	.09	2671	4.72	424	149	.26	6612	11.69
337	22	.04	1022	1.81	381	66	.12	2737	4.84	425	128	.23	6740	11.92
338	22	.04	1044	1.85	382	57	.10	2794	4.94	426	134	.24	6874	12.16
339	23	.04	1067	1.89	383	57	.10	2851	5.04	427	154	.27	7028	12.43
340	15	.03	1082	1.91	384	62	.11	2913	5.15	428	121	.21	7149	12.64
341	20	.04	1102	1.95	385	69	.12	2982	5.27	429	136	.24	7285	12.88
342	27	.05	1129	2.00	386	58	.10	3040	5.38	430	146	.26	7431	13.14
343	27	.05	1156	2.04	387	68	.12	3108	5.50	431	131	.23	7562	13.37

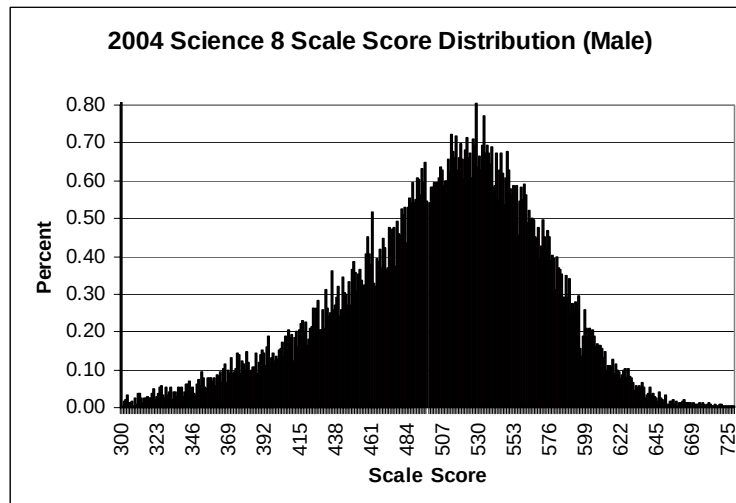
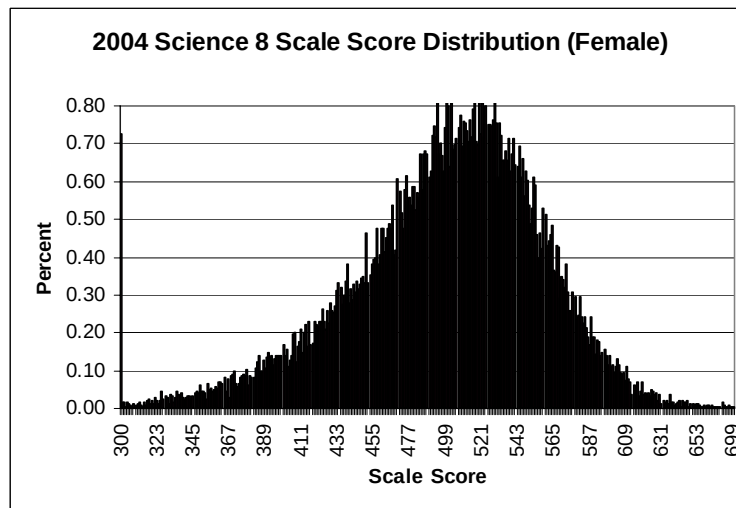
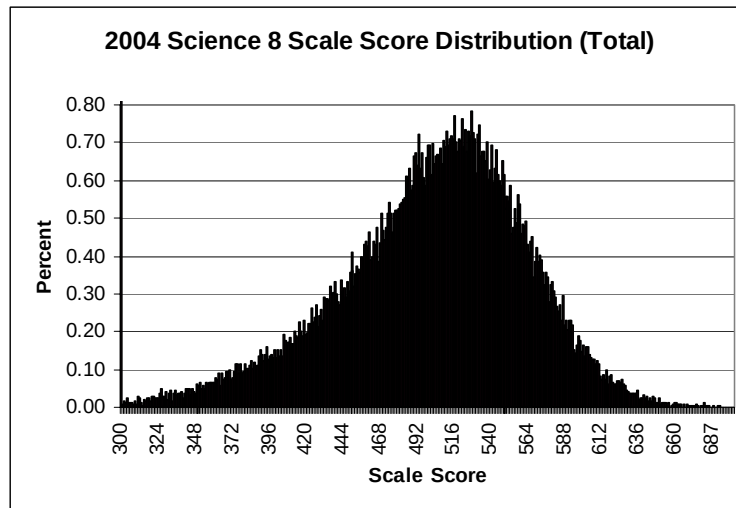
Appendix 21. Science 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
432	165	.29	7727	13.66	477	262	.46	17432	30.82	522	431	.76	33885	59.92
433	162	.29	7889	13.95	478	290	.51	17722	31.34	523	390	.69	34275	60.61
434	162	.29	8051	14.24	479	295	.52	18017	31.86	524	415	.73	34690	61.34
435	161	.28	8212	14.52	480	294	.52	18311	32.38	525	383	.68	35073	62.02
436	180	.32	8392	14.84	481	297	.53	18608	32.90	526	412	.73	35485	62.75
437	158	.28	8550	15.12	482	305	.54	18913	33.44	527	407	.72	35892	63.47
438	171	.30	8721	15.42	483	307	.54	19220	33.99	528	443	.78	36335	64.25
439	189	.33	8910	15.76	484	312	.55	19532	34.54	529	410	.72	36745	64.98
440	170	.30	9080	16.06	485	313	.55	19845	35.09	530	401	.71	37146	65.68
441	157	.28	9237	16.33	486	346	.61	20191	35.70	531	351	.62	37497	66.31
442	154	.27	9391	16.61	487	344	.61	20535	36.31	532	409	.72	37906	67.03
443	191	.34	9582	16.94	488	358	.63	20893	36.94	533	423	.75	38329	67.78
444	173	.31	9755	17.25	489	325	.57	21218	37.52	534	376	.66	38705	68.44
445	179	.32	9934	17.57	490	332	.59	21550	38.11	535	382	.68	39087	69.12
446	165	.29	10099	17.86	491	375	.66	21925	38.77	536	382	.68	39469	69.79
447	187	.33	10286	18.19	492	380	.67	22305	39.44	537	368	.65	39837	70.44
448	173	.31	10459	18.49	493	361	.64	22666	40.08	538	396	.70	40233	71.14
449	201	.36	10660	18.85	494	409	.72	23075	40.80	539	341	.60	40574	71.75
450	204	.36	10864	19.21	495	358	.63	23433	41.44	540	355	.63	40929	72.37
451	231	.41	11095	19.62	496	381	.67	23814	42.11	541	392	.69	41321	73.07
452	181	.32	11276	19.94	497	343	.61	24157	42.72	542	337	.60	41658	73.66
453	199	.35	11475	20.29	498	331	.59	24488	43.30	543	358	.63	42016	74.30
454	211	.37	11686	20.66	499	373	.66	24861	43.96	544	386	.68	42402	74.98
455	206	.36	11892	21.03	500	393	.69	25254	44.66	545	348	.62	42750	75.59
456	203	.36	12095	21.39	501	393	.69	25647	45.35	546	338	.60	43088	76.19
457	226	.40	12321	21.79	502	349	.62	25996	45.97	547	331	.59	43419	76.78
458	222	.39	12543	22.18	503	395	.70	26391	46.67	548	370	.65	43789	77.43
459	243	.43	12786	22.61	504	364	.64	26755	47.31	549	348	.62	44137	78.05
460	249	.44	13035	23.05	505	377	.67	27132	47.98	550	316	.56	44453	78.61
461	241	.43	13276	23.48	506	378	.67	27510	48.65	551	298	.53	44751	79.13
462	263	.47	13539	23.94	507	375	.66	27885	49.31	552	315	.56	45066	79.69
463	220	.39	13759	24.33	508	387	.68	28272	49.99	553	309	.55	45375	80.24
464	225	.40	13984	24.73	509	365	.65	28637	50.64	554	332	.59	45707	80.82
465	249	.44	14233	25.17	510	400	.71	29037	51.35	555	259	.46	45966	81.28
466	244	.43	14477	25.60	511	389	.69	29426	52.03	556	269	.48	46235	81.76
467	270	.48	14747	26.08	512	412	.73	29838	52.76	557	296	.52	46531	82.28
468	219	.39	14966	26.46	513	391	.69	30229	53.45	558	276	.49	46807	82.77
469	245	.43	15211	26.90	514	402	.71	30631	54.16	559	317	.56	47124	83.33
470	290	.51	15501	27.41	515	406	.72	31037	54.88	560	305	.54	47429	83.87
471	264	.47	15765	27.88	516	401	.71	31438	55.59	561	260	.46	47689	84.33
472	250	.44	16015	28.32	517	437	.77	31875	56.36	562	274	.48	47963	84.81
473	269	.48	16284	28.79	518	397	.70	32272	57.07	563	271	.48	48234	85.29
474	291	.51	16575	29.31	519	383	.68	32655	57.74	564	279	.49	48513	85.78
475	306	.54	16881	29.85	520	401	.71	33056	58.45	565	244	.43	48757	86.22
476	289	.51	17170	30.36	521	398	.70	33454	59.16	566	231	.41	48988	86.62

Appendix 21. Science 8 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
567	248	.44	49236	87.06	612	47	.08	55404	97.97	657	7	.01	56448	99.82
568	256	.45	49492	87.52	613	42	.07	55446	98.04	658	1	.00	56449	99.82
569	195	.34	49687	87.86	614	49	.09	55495	98.13	659	3	.01	56452	99.82
570	219	.39	49906	88.25	615	42	.07	55537	98.21	660	4	.01	56456	99.83
571	238	.42	50144	88.67	616	56	.10	55593	98.30	661	7	.01	56463	99.84
572	219	.39	50363	89.06	617	35	.06	55628	98.37	662	6	.01	56469	99.85
573	227	.40	50590	89.46	618	46	.08	55674	98.45	663	5	.01	56474	99.86
574	220	.39	50810	89.85	619	48	.08	55722	98.53	664	4	.01	56478	99.87
575	203	.36	51013	90.21	620	37	.07	55759	98.60	665	5	.01	56483	99.88
576	184	.33	51197	90.53	621	34	.06	55793	98.66	666	1	.00	56484	99.88
577	201	.36	51398	90.89	622	35	.06	55828	98.72	667	4	.01	56488	99.89
578	196	.35	51594	91.23	623	40	.07	55868	98.79	668	1	.00	56489	99.89
579	157	.28	51751	91.51	624	39	.07	55907	98.86	669	5	.01	56494	99.90
580	183	.32	51934	91.83	625	36	.06	55943	98.92	670	3	.01	56497	99.90
581	189	.33	52123	92.17	626	42	.07	55985	99.00	672	2	.00	56499	99.91
582	173	.31	52296	92.47	627	34	.06	56019	99.06	673	3	.01	56502	99.91
583	164	.29	52460	92.76	628	33	.06	56052	99.12	674	3	.01	56505	99.92
584	151	.27	52611	93.03	629	25	.04	56077	99.16	675	2	.00	56507	99.92
585	143	.25	52754	93.28	630	23	.04	56100	99.20	676	4	.01	56511	99.93
586	153	.27	52907	93.55	631	20	.04	56120	99.24	677	2	.00	56513	99.93
587	131	.23	53038	93.79	632	21	.04	56141	99.27	678	1	.00	56514	99.93
588	166	.29	53204	94.08	633	21	.04	56162	99.31	679	2	.00	56516	99.94
589	123	.22	53327	94.30	634	21	.04	56183	99.35	680	3	.01	56519	99.94
590	131	.23	53458	94.53	635	22	.04	56205	99.39	681	6	.01	56525	99.95
591	115	.20	53573	94.73	636	26	.05	56231	99.43	683	3	.01	56528	99.96
592	131	.23	53704	94.96	637	12	.02	56243	99.45	684	2	.00	56530	99.96
593	129	.23	53833	95.19	638	15	.03	56258	99.48	686	2	.00	56532	99.96
594	124	.22	53957	95.41	639	13	.02	56271	99.50	687	1	.00	56533	99.97
595	86	.15	54043	95.56	640	19	.03	56290	99.54	691	1	.00	56534	99.97
596	82	.14	54125	95.71	641	13	.02	56303	99.56	692	2	.00	56536	99.97
597	93	.16	54218	95.87	642	17	.03	56320	99.59	693	1	.00	56537	99.97
598	107	.19	54325	96.06	643	9	.02	56329	99.61	694	1	.00	56538	99.98
599	100	.18	54425	96.24	644	13	.02	56342	99.63	695	3	.01	56541	99.98
600	84	.15	54509	96.39	645	9	.02	56351	99.64	697	2	.00	56543	99.98
601	92	.16	54601	96.55	646	16	.03	56367	99.67	699	1	.00	56544	99.99
602	77	.14	54678	96.69	647	13	.02	56380	99.70	705	1	.00	56545	99.99
603	90	.16	54768	96.85	648	7	.01	56387	99.71	713	1	.00	56546	99.99
604	91	.16	54859	97.01	649	7	.01	56394	99.72	718	1	.00	56547	99.99
605	78	.14	54937	97.14	650	13	.02	56407	99.74	720	1	.00	56548	99.99
606	75	.13	55012	97.28	651	4	.01	56411	99.75	725	1	.00	56549	99.99
607	73	.13	55085	97.41	652	5	.01	56416	99.76	733	1	.00	56550	100.00
608	73	.13	55158	97.54	653	8	.01	56424	99.77	736	1	.00	56551	100.00
609	65	.11	55223	97.65	654	7	.01	56431	99.79	739	1	.00	56552	100.00
610	69	.12	55292	97.77	655	7	.01	56438	99.80					
611	65	.11	55357	97.89	656	3	.01	56441	99.80					

Figure 21. Science 8 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 22. Reading 9 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
350	305	.54	305	0.54	401	4	.01	385	0.68	452	5	.01	501	0.89
351	1	.00	306	0.54	402	1	.00	386	0.68	453	6	.01	507	0.90
352	1	.00	307	0.54	406	4	.01	390	0.69	454	3	.01	510	0.90
353	1	.00	308	0.54	407	2	.00	392	0.69	455	2	.00	512	0.90
354	1	.00	309	0.55	409	5	.01	397	0.70	456	8	.01	520	0.92
355	1	.00	310	0.55	410	3	.01	400	0.71	457	6	.01	526	0.93
356	1	.00	311	0.55	411	2	.00	402	0.71	458	3	.01	529	0.93
357	2	.00	313	0.55	413	3	.01	405	0.72	459	2	.00	531	0.94
358	2	.00	315	0.56	415	1	.00	406	0.72	460	3	.01	534	0.94
359	1	.00	316	0.56	416	3	.01	409	0.72	461	1	.00	535	0.95
360	1	.00	317	0.56	417	1	.00	410	0.72	462	7	.01	542	0.96
361	4	.01	321	0.57	418	3	.01	413	0.73	463	2	.00	544	0.96
362	2	.00	323	0.57	419	1	.00	414	0.73	464	7	.01	551	0.97
364	1	.00	324	0.57	420	2	.00	416	0.74	465	7	.01	558	0.99
365	2	.00	326	0.58	421	3	.01	419	0.74	466	5	.01	563	0.99
366	2	.00	328	0.58	422	3	.01	422	0.75	467	2	.00	565	1.00
367	1	.00	329	0.58	423	4	.01	426	0.75	468	5	.01	570	1.01
368	1	.00	330	0.58	424	3	.01	429	0.76	469	4	.01	574	1.01
370	1	.00	331	0.58	425	1	.00	430	0.76	470	4	.01	578	1.02
371	1	.00	332	0.59	426	3	.01	433	0.77	471	5	.01	583	1.03
372	3	.01	335	0.59	427	2	.00	435	0.77	472	3	.01	586	1.04
373	1	.00	336	0.59	428	2	.00	437	0.77	473	8	.01	594	1.05
375	2	.00	338	0.60	429	4	.01	441	0.78	474	3	.01	597	1.06
377	2	.00	340	0.60	430	2	.00	443	0.78	475	12	.02	609	1.08
378	2	.00	342	0.60	431	1	.00	444	0.78	476	3	.01	612	1.08
379	1	.00	343	0.61	432	2	.00	446	0.79	477	5	.01	617	1.09
380	1	.00	344	0.61	433	2	.00	448	0.79	478	5	.01	622	1.10
381	1	.00	345	0.61	434	2	.00	450	0.80	479	2	.00	624	1.10
383	1	.00	346	0.61	435	2	.00	452	0.80	480	7	.01	631	1.12
384	4	.01	350	0.62	436	4	.01	456	0.81	481	8	.01	639	1.13
385	2	.00	352	0.62	437	5	.01	461	0.81	482	9	.02	648	1.15
386	1	.00	353	0.62	438	2	.00	463	0.82	483	9	.02	657	1.16
387	4	.01	357	0.63	439	1	.00	464	0.82	484	4	.01	661	1.17
388	3	.01	360	0.64	440	1	.00	465	0.82	485	15	.03	676	1.19
390	2	.00	362	0.64	441	3	.01	468	0.83	486	8	.01	684	1.21
391	3	.01	365	0.65	443	5	.01	473	0.84	487	16	.03	700	1.24
392	1	.00	366	0.65	444	1	.00	474	0.84	488	7	.01	707	1.25
393	3	.01	369	0.65	445	2	.00	476	0.84	489	10	.02	717	1.27
394	1	.00	370	0.65	446	1	.00	477	0.84	490	11	.02	728	1.29
395	3	.01	373	0.66	447	5	.01	482	0.85	491	9	.02	737	1.30
396	1	.00	374	0.66	448	3	.01	485	0.86	492	11	.02	748	1.32
397	2	.00	376	0.66	449	5	.01	490	0.87	493	7	.01	755	1.33
398	2	.00	378	0.67	450	1	.00	491	0.87	494	9	.02	764	1.35
399	3	.01	381	0.67	451	5	.01	496	0.88	495	12	.02	776	1.37

Appendix 22. Reading 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
496	17	.03	793	1.40	541	49	.09	1866	3.30	586	101	.18	5271	9.32
497	11	.02	804	1.42	542	53	.09	1919	3.39	587	127	.22	5398	9.54
498	5	.01	809	1.43	543	48	.08	1967	3.48	588	111	.20	5509	9.74
499	12	.02	821	1.45	544	49	.09	2016	3.56	589	98	.17	5607	9.91
500	10	.02	831	1.47	545	53	.09	2069	3.66	590	128	.23	5735	10.14
501	12	.02	843	1.49	546	48	.08	2117	3.74	591	121	.21	5856	10.35
502	13	.02	856	1.51	547	45	.08	2162	3.82	592	151	.27	6007	10.62
503	15	.03	871	1.54	548	48	.08	2210	3.91	593	149	.26	6156	10.88
504	12	.02	883	1.56	549	61	.11	2271	4.01	594	154	.27	6310	11.15
505	12	.02	895	1.58	550	42	.07	2313	4.09	595	135	.24	6445	11.39
506	20	.04	915	1.62	551	50	.09	2363	4.18	596	162	.29	6607	11.68
507	20	.04	935	1.65	552	51	.09	2414	4.27	597	140	.25	6747	11.92
508	16	.03	951	1.68	553	54	.10	2468	4.36	598	152	.27	6899	12.19
509	22	.04	973	1.72	554	64	.11	2532	4.47	599	173	.31	7072	12.50
510	22	.04	995	1.76	555	53	.09	2585	4.57	600	149	.26	7221	12.76
511	13	.02	1008	1.78	556	74	.13	2659	4.70	601	161	.28	7382	13.05
512	17	.03	1025	1.81	557	72	.13	2731	4.83	602	169	.30	7551	13.34
513	22	.04	1047	1.85	558	62	.11	2793	4.94	603	154	.27	7705	13.62
514	14	.02	1061	1.88	559	57	.10	2850	5.04	604	176	.31	7881	13.93
515	19	.03	1080	1.91	560	59	.10	2909	5.14	605	162	.29	8043	14.21
516	15	.03	1095	1.94	561	58	.10	2967	5.24	606	186	.33	8229	14.54
517	23	.04	1118	1.98	562	68	.12	3035	5.36	607	199	.35	8428	14.89
518	29	.05	1147	2.03	563	72	.13	3107	5.49	608	206	.36	8634	15.26
519	23	.04	1170	2.07	564	68	.12	3175	5.61	609	214	.38	8848	15.64
520	22	.04	1192	2.11	565	71	.13	3246	5.74	610	199	.35	9047	15.99
521	29	.05	1221	2.16	566	79	.14	3325	5.88	611	205	.36	9252	16.35
522	19	.03	1240	2.19	567	76	.13	3401	6.01	612	205	.36	9457	16.71
523	26	.05	1266	2.24	568	74	.13	3475	6.14	613	211	.37	9668	17.09
524	22	.04	1288	2.28	569	81	.14	3556	6.28	614	231	.41	9899	17.49
525	32	.06	1320	2.33	570	90	.16	3646	6.44	615	178	.31	10077	17.81
526	28	.05	1348	2.38	571	73	.13	3719	6.57	616	219	.39	10296	18.20
527	29	.05	1377	2.43	572	87	.15	3806	6.73	617	223	.39	10519	18.59
528	27	.05	1404	2.48	573	90	.16	3896	6.89	618	256	.45	10775	19.04
529	33	.06	1437	2.54	574	91	.16	3987	7.05	619	235	.42	11010	19.46
530	30	.05	1467	2.59	575	84	.15	4071	7.19	620	221	.39	11231	19.85
531	25	.04	1492	2.64	576	97	.17	4168	7.37	621	253	.45	11484	20.29
532	38	.07	1530	2.70	577	111	.20	4279	7.56	622	261	.46	11745	20.76
533	36	.06	1566	2.77	578	95	.17	4374	7.73	623	262	.46	12007	21.22
534	28	.05	1594	2.82	579	123	.22	4497	7.95	624	260	.46	12267	21.68
535	32	.06	1626	2.87	580	113	.20	4610	8.15	625	284	.50	12551	22.18
536	27	.05	1653	2.92	581	115	.20	4725	8.35	626	271	.48	12822	22.66
537	44	.08	1697	3.00	582	110	.19	4835	8.54	627	257	.45	13079	23.11
538	38	.07	1735	3.07	583	98	.17	4933	8.72	628	295	.52	13374	23.63
539	44	.08	1779	3.14	584	107	.19	5040	8.91	629	294	.52	13668	24.15
540	38	.07	1817	3.21	585	130	.23	5170	9.14	630	283	.50	13951	24.65

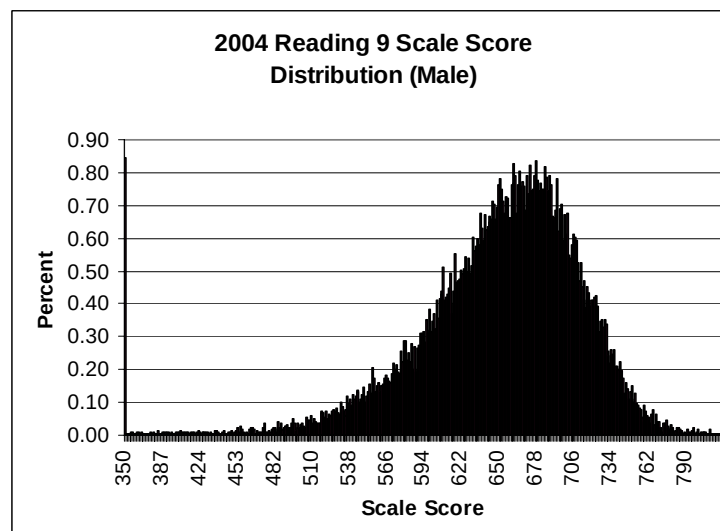
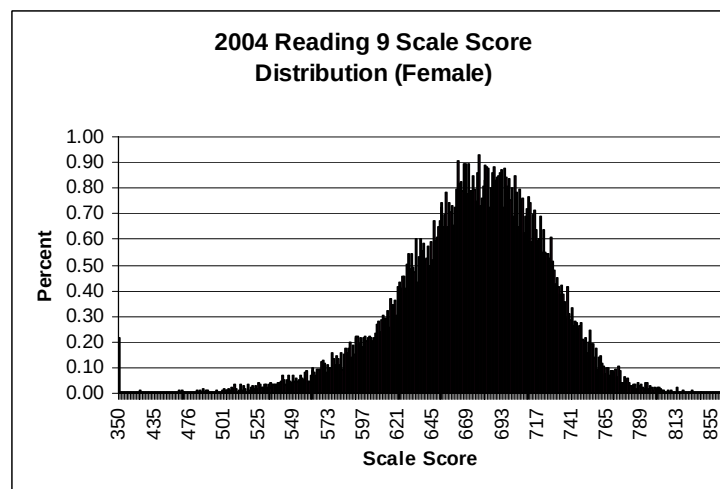
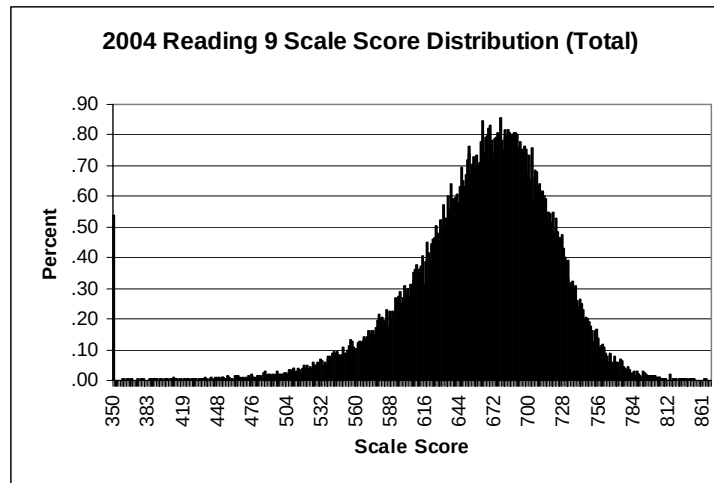
Appendix 22. Reading 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
631	324	.57	14275	25.23	676	453	.80	31936	56.44	721	271	.48	49587	87.63
632	298	.53	14573	25.75	677	485	.86	32421	57.30	722	298	.53	49885	88.16
633	298	.53	14871	26.28	678	444	.78	32865	58.08	723	275	.49	50160	88.64
634	340	.60	15211	26.88	679	424	.75	33289	58.83	724	264	.47	50424	89.11
635	284	.50	15495	27.38	680	448	.79	33737	59.62	725	264	.47	50688	89.58
636	316	.56	15811	27.94	681	461	.81	34198	60.44	726	236	.42	50924	89.99
637	363	.64	16174	28.58	682	451	.80	34649	61.23	727	269	.48	51193	90.47
638	336	.59	16510	29.18	683	461	.81	35110	62.05	728	244	.43	51437	90.90
639	333	.59	16843	29.77	684	458	.81	35568	62.86	729	227	.40	51664	91.30
640	339	.60	17182	30.36	685	436	.77	36004	63.63	730	219	.39	51883	91.69
641	327	.58	17509	30.94	686	449	.79	36453	64.42	731	222	.39	52105	92.08
642	342	.60	17851	31.55	687	453	.80	36906	65.22	732	188	.33	52293	92.41
643	326	.58	18177	32.12	688	456	.81	37362	66.03	733	176	.31	52469	92.72
644	357	.63	18534	32.75	689	457	.81	37819	66.83	734	180	.32	52649	93.04
645	334	.59	18868	33.34	690	453	.80	38272	67.64	735	182	.32	52831	93.36
646	392	.69	19260	34.04	691	428	.76	38700	68.39	736	170	.30	53001	93.66
647	369	.65	19629	34.69	692	430	.76	39130	69.15	737	156	.28	53157	93.94
648	358	.63	19987	35.32	693	439	.78	39569	69.93	738	175	.31	53332	94.25
649	380	.67	20367	35.99	694	426	.75	39995	70.68	739	147	.26	53479	94.51
650	407	.72	20774	36.71	695	421	.74	40416	71.42	740	137	.24	53616	94.75
651	431	.76	21205	37.47	696	432	.76	40848	72.19	741	149	.26	53765	95.01
652	417	.74	21622	38.21	697	427	.75	41275	72.94	742	142	.25	53907	95.27
653	378	.67	22000	38.88	698	417	.74	41692	73.68	743	130	.23	54037	95.50
654	398	.70	22398	39.58	699	379	.67	42071	74.35	744	129	.23	54166	95.72
655	413	.73	22811	40.31	700	415	.73	42486	75.08	745	113	.20	54279	95.92
656	389	.69	23200	41.00	701	368	.65	42854	75.73	746	116	.20	54395	96.13
657	415	.73	23615	41.73	702	430	.76	43284	76.49	747	114	.20	54509	96.33
658	388	.69	24003	42.42	703	375	.66	43659	77.16	748	107	.19	54616	96.52
659	395	.70	24398	43.12	704	335	.59	43994	77.75	749	97	.17	54713	96.69
660	402	.71	24800	43.83	705	388	.69	44382	78.43	750	101	.18	54814	96.87
661	439	.78	25239	44.60	706	385	.68	44767	79.11	751	91	.16	54905	97.03
662	442	.78	25681	45.38	707	357	.63	45124	79.74	752	73	.13	54978	97.16
663	479	.85	26160	46.23	708	347	.61	45471	80.36	753	92	.16	55070	97.32
664	422	.75	26582	46.98	709	362	.64	45833	81.00	754	95	.17	55165	97.49
665	448	.79	27030	47.77	710	350	.62	46183	81.62	755	80	.14	55245	97.63
666	450	.80	27480	48.56	711	348	.61	46531	82.23	756	77	.14	55322	97.77
667	466	.82	27946	49.39	712	341	.60	46872	82.83	757	61	.11	55383	97.87
668	471	.83	28417	50.22	713	335	.59	47207	83.43	758	64	.11	55447	97.99
669	434	.77	28851	50.99	714	299	.53	47506	83.95	759	37	.07	55484	98.05
670	442	.78	29293	51.77	715	311	.55	47817	84.50	760	66	.12	55550	98.17
671	417	.74	29710	52.50	716	310	.55	48127	85.05	761	61	.11	55611	98.28
672	446	.79	30156	53.29	717	308	.54	48435	85.60	762	50	.09	55661	98.37
673	447	.79	30603	54.08	718	290	.51	48725	86.11	763	45	.08	55706	98.44
674	458	.81	31061	54.89	719	281	.50	49006	86.60	764	32	.06	55738	98.50
675	422	.75	31483	55.64	720	310	.55	49316	87.15	765	46	.08	55784	98.58

Appendix 22. Reading 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
766	50	.09	55834	98.67	794	8	.01	56411	99.69	824	2	.00	56548	99.93
767	28	.05	55862	98.72	795	12	.02	56423	99.71	825	2	.00	56550	99.94
768	32	.06	55894	98.78	796	9	.02	56432	99.73	826	2	.00	56552	99.94
769	43	.08	55937	98.85	797	9	.02	56441	99.74	827	3	.01	56555	99.95
770	34	.06	55971	98.91	798	7	.01	56448	99.76	828	2	.00	56557	99.95
771	30	.05	56001	98.97	799	8	.01	56456	99.77	829	2	.00	56559	99.95
772	32	.06	56033	99.02	800	9	.02	56465	99.79	832	1	.00	56560	99.95
773	20	.04	56053	99.06	801	7	.01	56472	99.80	833	1	.00	56561	99.96
774	39	.07	56092	99.13	802	9	.02	56481	99.81	836	2	.00	56563	99.96
775	35	.06	56127	99.19	803	5	.01	56486	99.82	839	2	.00	56565	99.96
776	25	.04	56152	99.23	804	6	.01	56492	99.83	840	2	.00	56567	99.97
777	20	.04	56172	99.27	805	6	.01	56498	99.84	841	1	.00	56568	99.97
778	23	.04	56195	99.31	806	5	.01	56503	99.85	843	2	.00	56570	99.97
779	20	.04	56215	99.34	807	2	.00	56505	99.86	845	1	.00	56571	99.97
780	25	.04	56240	99.39	808	4	.01	56509	99.86	848	1	.00	56572	99.98
781	18	.03	56258	99.42	809	3	.01	56512	99.87	854	1	.00	56573	99.98
782	11	.02	56269	99.44	810	4	.01	56516	99.88	855	1	.00	56574	99.98
783	12	.02	56281	99.46	811	2	.00	56518	99.88	859	1	.00	56575	99.98
784	15	.03	56296	99.49	812	1	.00	56519	99.88	861	1	.00	56576	99.98
785	16	.03	56312	99.52	813	1	.00	56520	99.88	862	1	.00	56577	99.98
786	8	.01	56320	99.53	814	11	.02	56531	99.90	864	3	.01	56580	99.99
787	17	.03	56337	99.56	815	1	.00	56532	99.90	874	2	.00	56582	99.99
788	12	.02	56349	99.58	816	3	.01	56535	99.91	877	1	.00	56583	99.99
789	10	.02	56359	99.60	817	1	.00	56536	99.91	893	1	.00	56584	100.00
790	8	.01	56367	99.61	818	4	.01	56540	99.92	908	1	.00	56585	100.00
791	6	.01	56373	99.62	820	2	.00	56542	99.92	995	1	.00	56586	100.00
792	16	.03	56389	99.65	822	1	.00	56543	99.92					
793	14	.02	56403	99.68	823	3	.01	56546	99.93					

Figure 22. Reading 9 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 23. Writing 9 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
260	37	.07	37	0.07	325	1	.00	112	0.20	369	8	.01	332	0.59
263	1	.00	38	0.07	326	4	.01	116	0.20	370	13	.02	345	0.61
264	1	.00	39	0.07	327	2	.00	118	0.21	371	4	.01	349	0.62
265	1	.00	40	0.07	328	2	.00	120	0.21	372	13	.02	362	0.64
266	1	.00	41	0.07	329	2	.00	122	0.22	373	10	.02	372	0.66
267	1	.00	42	0.07	330	1	.00	123	0.22	374	13	.02	385	0.68
268	1	.00	43	0.08	331	1	.00	124	0.22	375	19	.03	404	0.71
269	1	.00	44	0.08	332	1	.00	125	0.22	376	13	.02	417	0.74
270	1	.00	45	0.08	333	2	.00	127	0.22	377	8	.01	425	0.75
271	2	.00	47	0.08	334	2	.00	129	0.23	378	16	.03	441	0.78
274	1	.00	48	0.08	335	4	.01	133	0.24	379	17	.03	458	0.81
276	1	.00	49	0.09	336	4	.01	137	0.24	380	11	.02	469	0.83
279	3	.01	52	0.09	337	3	.01	140	0.25	381	13	.02	482	0.85
281	1	.00	53	0.09	338	4	.01	144	0.25	382	10	.02	492	0.87
285	1	.00	54	0.10	339	3	.01	147	0.26	383	17	.03	509	0.90
286	1	.00	55	0.10	340	4	.01	151	0.27	384	23	.04	532	0.94
289	1	.00	56	0.10	341	8	.01	159	0.28	385	12	.02	544	0.96
290	2	.00	58	0.10	342	7	.01	166	0.29	386	19	.03	563	0.99
291	2	.00	60	0.11	343	4	.01	170	0.30	387	10	.02	573	1.01
292	2	.00	62	0.11	344	1	.00	171	0.30	388	21	.04	594	1.05
293	1	.00	63	0.11	345	1	.00	172	0.30	389	23	.04	617	1.09
294	2	.00	65	0.11	346	7	.01	179	0.32	390	11	.02	628	1.11
295	2	.00	67	0.12	347	3	.01	182	0.32	391	28	.05	656	1.16
296	4	.01	71	0.13	348	4	.01	186	0.33	392	24	.04	680	1.20
297	1	.00	72	0.13	349	5	.01	191	0.34	393	18	.03	698	1.23
298	1	.00	73	0.13	350	11	.02	202	0.36	394	19	.03	717	1.27
301	1	.00	74	0.13	351	5	.01	207	0.37	395	28	.05	745	1.32
302	1	.00	75	0.13	352	8	.01	215	0.38	396	19	.03	764	1.35
303	1	.00	76	0.13	353	3	.01	218	0.39	397	23	.04	787	1.39
304	2	.00	78	0.14	354	5	.01	223	0.39	398	17	.03	804	1.42
305	5	.01	83	0.15	355	9	.02	232	0.41	399	24	.04	828	1.46
310	2	.00	85	0.15	356	11	.02	243	0.43	400	19	.03	847	1.50
311	2	.00	87	0.15	357	7	.01	250	0.44	401	26	.05	873	1.54
312	5	.01	92	0.16	358	3	.01	253	0.45	402	30	.05	903	1.60
313	1	.00	93	0.16	359	8	.01	261	0.46	403	26	.05	929	1.64
314	4	.01	97	0.17	360	4	.01	265	0.47	404	35	.06	964	1.70
316	1	.00	98	0.17	361	3	.01	268	0.47	405	28	.05	992	1.75
318	1	.00	99	0.17	362	7	.01	275	0.49	406	16	.03	1008	1.78
319	3	.01	102	0.18	363	9	.02	284	0.50	407	23	.04	1031	1.82
320	1	.00	103	0.18	364	3	.01	287	0.51	408	24	.04	1055	1.86
321	2	.00	105	0.19	365	8	.01	295	0.52	409	40	.07	1095	1.94
322	3	.01	108	0.19	366	16	.03	311	0.55	410	30	.05	1125	1.99
323	2	.00	110	0.19	367	6	.01	317	0.56	411	19	.03	1144	2.02
324	1	.00	111	0.20	368	7	.01	324	0.57	412	18	.03	1162	2.05

Appendix 23. Writing 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
413	27	.05	1189	2.10	458	86	.15	3766	6.66	503	192	.34	9986	17.65
414	24	.04	1213	2.14	459	98	.17	3864	6.83	504	203	.36	10189	18.01
415	36	.06	1249	2.21	460	102	.18	3966	7.01	505	188	.33	10377	18.34
416	29	.05	1278	2.26	461	99	.17	4065	7.18	506	184	.33	10561	18.66
417	29	.05	1307	2.31	462	107	.19	4172	7.37	507	185	.33	10746	18.99
418	39	.07	1346	2.38	463	80	.14	4252	7.51	508	200	.35	10946	19.34
419	32	.06	1378	2.44	464	107	.19	4359	7.70	509	211	.37	11157	19.72
420	36	.06	1414	2.50	465	109	.19	4468	7.90	510	217	.38	11374	20.10
421	54	.10	1468	2.59	466	125	.22	4593	8.12	511	189	.33	11563	20.43
422	31	.05	1499	2.65	467	101	.18	4694	8.30	512	206	.36	11769	20.80
423	29	.05	1528	2.70	468	108	.19	4802	8.49	513	213	.38	11982	21.17
424	48	.08	1576	2.79	469	122	.22	4924	8.70	514	213	.38	12195	21.55
425	36	.06	1612	2.85	470	122	.22	5046	8.92	515	218	.39	12413	21.94
426	52	.09	1664	2.94	471	121	.21	5167	9.13	516	218	.39	12631	22.32
427	48	.08	1712	3.03	472	107	.19	5274	9.32	517	219	.39	12850	22.71
428	55	.10	1767	3.12	473	117	.21	5391	9.53	518	198	.35	13048	23.06
429	44	.08	1811	3.20	474	125	.22	5516	9.75	519	209	.37	13257	23.43
430	52	.09	1863	3.29	475	121	.21	5637	9.96	520	227	.40	13484	23.83
431	57	.10	1920	3.39	476	131	.23	5768	10.19	521	215	.38	13699	24.21
432	53	.09	1973	3.49	477	138	.24	5906	10.44	522	231	.41	13930	24.62
433	39	.07	2012	3.56	478	144	.25	6050	10.69	523	240	.42	14170	25.04
434	52	.09	2064	3.65	479	146	.26	6196	10.95	524	236	.42	14406	25.46
435	50	.09	2114	3.74	480	136	.24	6332	11.19	525	224	.40	14630	25.85
436	55	.10	2169	3.83	481	126	.22	6458	11.41	526	211	.37	14841	26.23
437	66	.12	2235	3.95	482	145	.26	6603	11.67	527	257	.45	15098	26.68
438	61	.11	2296	4.06	483	145	.26	6748	11.92	528	252	.45	15350	27.13
439	62	.11	2358	4.17	484	163	.29	6911	12.21	529	238	.42	15588	27.55
440	74	.13	2432	4.30	485	144	.25	7055	12.47	530	255	.45	15843	28.00
441	54	.10	2486	4.39	486	120	.21	7175	12.68	531	263	.46	16106	28.46
442	53	.09	2539	4.49	487	151	.27	7326	12.95	532	255	.45	16361	28.91
443	65	.11	2604	4.60	488	146	.26	7472	13.20	533	273	.48	16634	29.39
444	56	.10	2660	4.70	489	156	.28	7628	13.48	534	247	.44	16881	29.83
445	73	.13	2733	4.83	490	163	.29	7791	13.77	535	242	.43	17123	30.26
446	72	.13	2805	4.96	491	171	.30	7962	14.07	536	256	.45	17379	30.71
447	91	.16	2896	5.12	492	152	.27	8114	14.34	537	268	.47	17647	31.19
448	57	.10	2953	5.22	493	150	.27	8264	14.60	538	285	.50	17932	31.69
449	73	.13	3026	5.35	494	155	.27	8419	14.88	539	282	.50	18214	32.19
450	78	.14	3104	5.49	495	160	.28	8579	15.16	540	264	.47	18478	32.65
451	63	.11	3167	5.60	496	152	.27	8731	15.43	541	318	.56	18796	33.22
452	78	.14	3245	5.73	497	182	.32	8913	15.75	542	259	.46	19055	33.67
453	80	.14	3325	5.88	498	170	.30	9083	16.05	543	318	.56	19373	34.24
454	78	.14	3403	6.01	499	199	.35	9282	16.40	544	322	.57	19695	34.80
455	98	.17	3501	6.19	500	164	.29	9446	16.69	545	282	.50	19977	35.30
456	80	.14	3581	6.33	501	178	.31	9624	17.01	546	271	.48	20248	35.78
457	99	.17	3680	6.50	502	170	.30	9794	17.31	547	284	.50	20532	36.28

Appendix 23. Writing 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
548	319	.56	20851	36.85	593	341	.60	35262	62.31	638	210	.37	47347	83.67
549	295	.52	21146	37.37	594	321	.57	35583	62.88	639	240	.42	47587	84.09
550	311	.55	21457	37.92	595	314	.55	35897	63.44	640	191	.34	47778	84.43
551	341	.60	21798	38.52	596	320	.57	36217	64.00	641	174	.31	47952	84.74
552	326	.58	22124	39.10	597	306	.54	36523	64.54	642	193	.34	48145	85.08
553	283	.50	22407	39.60	598	356	.63	36879	65.17	643	191	.34	48336	85.42
554	271	.48	22678	40.08	599	308	.54	37187	65.72	644	170	.30	48506	85.72
555	302	.53	22980	40.61	600	306	.54	37493	66.26	645	202	.36	48708	86.07
556	315	.56	23295	41.17	601	292	.52	37785	66.77	646	171	.30	48879	86.38
557	294	.52	23589	41.69	602	323	.57	38108	67.34	647	173	.31	49052	86.68
558	303	.54	23892	42.22	603	302	.53	38410	67.88	648	154	.27	49206	86.95
559	312	.55	24204	42.77	604	289	.51	38699	68.39	649	160	.28	49366	87.24
560	334	.59	24538	43.36	605	274	.48	38973	68.87	650	202	.36	49568	87.59
561	307	.54	24845	43.91	606	296	.52	39269	69.39	651	155	.27	49723	87.87
562	291	.51	25136	44.42	607	297	.52	39566	69.92	652	173	.31	49896	88.17
563	341	.60	25477	45.02	608	287	.51	39853	70.43	653	174	.31	50070	88.48
564	310	.55	25787	45.57	609	295	.52	40148	70.95	654	165	.29	50235	88.77
565	353	.62	26140	46.19	610	277	.49	40425	71.44	655	154	.27	50389	89.05
566	336	.59	26476	46.79	611	273	.48	40698	71.92	656	161	.28	50550	89.33
567	336	.59	26812	47.38	612	297	.52	40995	72.44	657	161	.28	50711	89.61
568	343	.61	27155	47.99	613	276	.49	41271	72.93	658	152	.27	50863	89.88
569	304	.54	27459	48.52	614	283	.50	41554	73.43	659	139	.25	51002	90.13
570	310	.55	27769	49.07	615	272	.48	41826	73.91	660	141	.25	51143	90.38
571	313	.55	28082	49.63	616	291	.51	42117	74.43	661	143	.25	51286	90.63
572	346	.61	28428	50.24	617	266	.47	42383	74.90	662	104	.18	51390	90.81
573	322	.57	28750	50.81	618	251	.44	42634	75.34	663	139	.25	51529	91.06
574	331	.58	29081	51.39	619	264	.47	42898	75.81	664	145	.26	51674	91.32
575	315	.56	29396	51.95	620	261	.46	43159	76.27	665	123	.22	51797	91.53
576	308	.54	29704	52.49	621	235	.42	43394	76.68	666	119	.21	51916	91.74
577	329	.58	30033	53.07	622	284	.50	43678	77.19	667	136	.24	52052	91.98
578	307	.54	30340	53.62	623	235	.42	43913	77.60	668	121	.21	52173	92.20
579	318	.56	30658	54.18	624	257	.45	44170	78.06	669	98	.17	52271	92.37
580	329	.58	30987	54.76	625	272	.48	44442	78.54	670	103	.18	52374	92.55
581	350	.62	31337	55.38	626	249	.44	44691	78.98	671	125	.22	52499	92.77
582	326	.58	31663	55.95	627	241	.43	44932	79.40	672	102	.18	52601	92.95
583	349	.62	32012	56.57	628	223	.39	45155	79.80	673	122	.22	52723	93.17
584	335	.59	32347	57.16	629	231	.41	45386	80.20	674	124	.22	52847	93.39
585	347	.61	32694	57.78	630	251	.44	45637	80.65	675	83	.15	52930	93.54
586	337	.60	33031	58.37	631	216	.38	45853	81.03	676	101	.18	53031	93.71
587	337	.60	33368	58.97	632	216	.38	46069	81.41	677	91	.16	53122	93.88
588	312	.55	33680	59.52	633	231	.41	46300	81.82	678	106	.19	53228	94.06
589	274	.48	33954	60.00	634	207	.37	46507	82.19	679	99	.17	53327	94.24
590	339	.60	34293	60.60	635	222	.39	46729	82.58	680	101	.18	53428	94.42
591	325	.57	34618	61.18	636	201	.36	46930	82.93	681	87	.15	53515	94.57
592	303	.54	34921	61.71	637	207	.37	47137	83.30	682	77	.14	53592	94.71

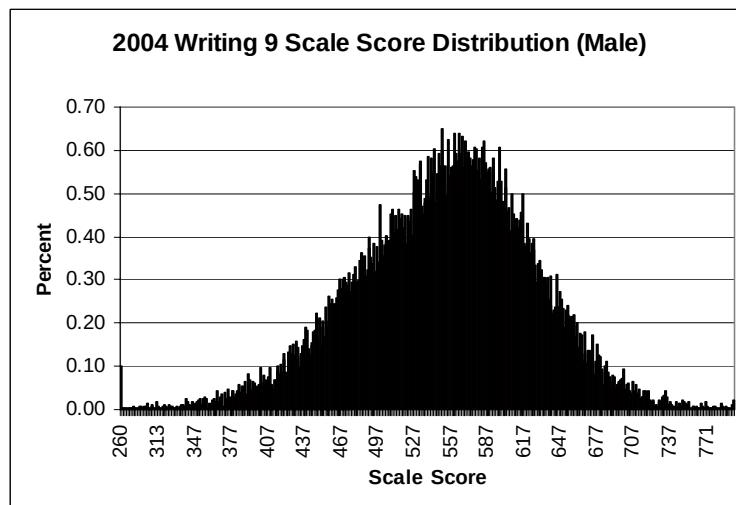
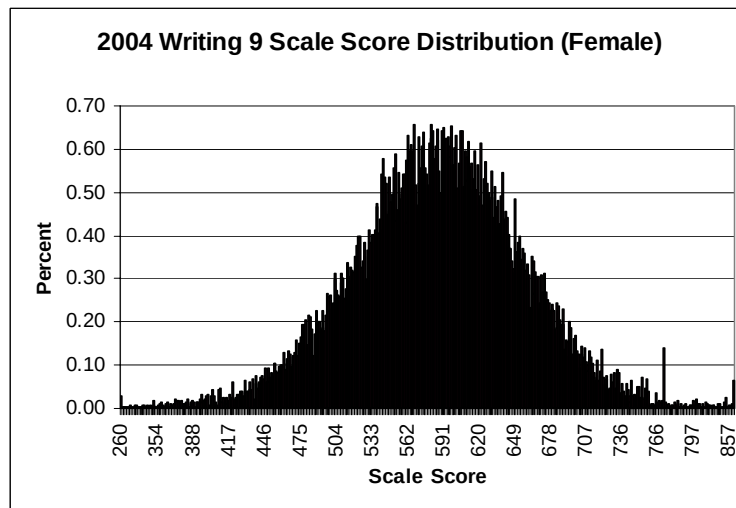
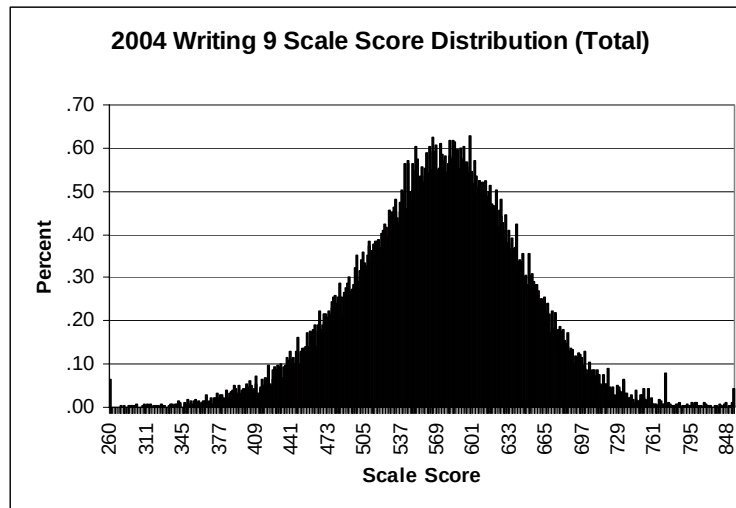
Appendix 23. Writing 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
683	84	.15	53676	94.85	728	28	.05	55821	98.64	773	6	.01	56408	99.68
684	80	.14	53756	95.00	729	22	.04	55843	98.68	774	2	.00	56410	99.69
685	97	.17	53853	95.17	730	27	.05	55870	98.73	775	4	.01	56414	99.69
686	74	.13	53927	95.30	731	21	.04	55891	98.77	776	2	.00	56416	99.70
687	78	.14	54005	95.44	732	10	.02	55901	98.79	777	2	.00	56418	99.70
688	75	.13	54080	95.57	733	34	.06	55935	98.85	778	3	.01	56421	99.70
689	76	.13	54156	95.70	734	36	.06	55971	98.91	779	2	.00	56423	99.71
690	57	.10	54213	95.80	735	18	.03	55989	98.94	780	4	.01	56427	99.72
691	67	.12	54280	95.92	736	19	.03	56008	98.98	781	3	.01	56430	99.72
692	65	.11	54345	96.04	737	12	.02	56020	99.00	782	5	.01	56435	99.73
693	47	.08	54392	96.12	738	11	.02	56031	99.02	783	7	.01	56442	99.74
694	72	.13	54464	96.25	739	12	.02	56043	99.04	784	1	.00	56443	99.74
695	69	.12	54533	96.37	740	16	.03	56059	99.07	786	3	.01	56446	99.75
696	54	.10	54587	96.46	741	15	.03	56074	99.09	787	1	.00	56447	99.75
697	65	.11	54652	96.58	742	10	.02	56084	99.11	788	2	.00	56449	99.75
698	55	.10	54707	96.68	743	6	.01	56090	99.12	789	2	.00	56451	99.76
699	74	.13	54781	96.81	744	23	.04	56113	99.16	790	4	.01	56455	99.76
700	50	.09	54831	96.90	745	10	.02	56123	99.18	791	2	.00	56457	99.77
701	49	.09	54880	96.98	746	9	.02	56132	99.19	792	1	.00	56458	99.77
702	43	.08	54923	97.06	747	8	.01	56140	99.21	794	3	.01	56461	99.78
703	58	.10	54981	97.16	748	11	.02	56151	99.23	795	2	.00	56463	99.78
704	48	.08	55029	97.24	749	16	.03	56167	99.26	796	6	.01	56469	99.79
705	44	.08	55073	97.32	750	16	.03	56183	99.28	797	5	.01	56474	99.80
706	49	.09	55122	97.41	751	13	.02	56196	99.31	798	2	.00	56476	99.80
707	49	.09	55171	97.50	752	25	.04	56221	99.35	799	6	.01	56482	99.81
708	40	.07	55211	97.57	753	11	.02	56232	99.37	801	6	.01	56488	99.82
709	41	.07	55252	97.64	754	9	.02	56241	99.39	802	3	.01	56491	99.83
710	48	.08	55300	97.72	755	15	.03	56256	99.41	803	3	.01	56494	99.83
711	43	.08	55343	97.80	756	24	.04	56280	99.46	804	1	.00	56495	99.84
712	43	.08	55386	97.88	757	4	.01	56284	99.46	805	3	.01	56498	99.84
713	30	.05	55416	97.93	758	12	.02	56296	99.48	807	1	.00	56499	99.84
714	28	.05	55444	97.98	759	4	.01	56300	99.49	808	1	.00	56500	99.84
715	26	.05	55470	98.02	760	5	.01	56305	99.50	809	6	.01	56506	99.86
716	43	.08	55513	98.10	761	4	.01	56309	99.51	810	4	.01	56510	99.86
717	31	.05	55544	98.16	762	4	.01	56313	99.51	811	2	.00	56512	99.87
718	31	.05	55575	98.21	763	1	.00	56314	99.52	812	2	.00	56514	99.87
719	26	.05	55601	98.26	764	2	.00	56316	99.52	814	2	.00	56516	99.87
720	50	.09	55651	98.34	765	11	.02	56327	99.54	817	2	.00	56518	99.88
721	26	.05	55677	98.39	766	5	.01	56332	99.55	820	1	.00	56519	99.88
722	20	.04	55697	98.43	767	9	.02	56341	99.56	821	1	.00	56520	99.88
723	24	.04	55721	98.47	768	4	.01	56345	99.57	822	1	.00	56521	99.88
724	27	.05	55748	98.52	769	5	.01	56350	99.58	823	2	.00	56523	99.89
725	14	.02	55762	98.54	770	6	.01	56356	99.59	826	3	.01	56526	99.89
726	16	.03	55778	98.57	771	44	.08	56400	99.67	827	1	.00	56527	99.89
727	15	.03	55793	98.60	772	2	.00	56402	99.67	831	1	.00	56528	99.89

Appendix 23. Writing 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
832	4	.01	56532	99.90	840	4	.01	56542	99.92	862	2	.00	56555	99.94
835	1	.00	56533	99.90	845	7	.01	56549	99.93	867	6	.01	56561	99.95
837	3	.01	56536	99.91	848	1	.00	56550	99.93	924	3	.01	56564	99.96
838	1	.00	56537	99.91	849	1	.00	56551	99.93	930	24	.04	56588	100.00
839	1	.00	56538	99.91	857	2	.00	56553	99.94					

Figure 23. Writing 9 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 24. Mathematics 9 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
340	1,354	2.39	1354	2.39	384	12	.02	1665	2.93	428	52	.09	2781	4.90
341	9	.02	1363	2.40	385	8	.01	1673	2.95	429	39	.07	2820	4.97
342	9	.02	1372	2.42	386	11	.02	1684	2.97	430	36	.06	2856	5.03
343	5	.01	1377	2.43	387	13	.02	1697	2.99	431	42	.07	2898	5.11
344	3	.01	1380	2.43	388	11	.02	1708	3.01	432	39	.07	2937	5.17
345	4	.01	1384	2.44	389	19	.03	1727	3.04	433	36	.06	2973	5.24
346	2	.00	1386	2.44	390	12	.02	1739	3.06	434	55	.10	3028	5.34
347	2	.00	1388	2.45	391	14	.02	1753	3.09	435	47	.08	3075	5.42
348	5	.01	1393	2.45	392	23	.04	1776	3.13	436	54	.10	3129	5.51
349	2	.00	1395	2.46	393	11	.02	1787	3.15	437	48	.08	3177	5.60
350	1	.00	1396	2.46	394	11	.02	1798	3.17	438	59	.10	3236	5.70
351	6	.01	1402	2.47	395	24	.04	1822	3.21	439	50	.09	3286	5.79
352	7	.01	1409	2.48	396	20	.04	1842	3.25	440	44	.08	3330	5.87
353	6	.01	1415	2.49	397	15	.03	1857	3.27	441	47	.08	3377	5.95
354	8	.01	1423	2.51	398	14	.02	1871	3.30	442	50	.09	3427	6.04
355	6	.01	1429	2.52	399	26	.05	1897	3.34	443	70	.12	3497	6.16
356	6	.01	1435	2.53	400	22	.04	1919	3.38	444	69	.12	3566	6.28
357	4	.01	1439	2.54	401	24	.04	1943	3.42	445	63	.11	3629	6.39
358	4	.01	1443	2.54	402	15	.03	1958	3.45	446	66	.12	3695	6.51
359	3	.01	1446	2.55	403	23	.04	1981	3.49	447	64	.11	3759	6.62
360	5	.01	1451	2.56	404	23	.04	2004	3.53	448	66	.12	3825	6.74
361	5	.01	1456	2.57	405	25	.04	2029	3.58	449	73	.13	3898	6.87
362	12	.02	1468	2.59	406	22	.04	2051	3.61	450	74	.13	3972	7.00
363	3	.01	1471	2.59	407	27	.05	2078	3.66	451	73	.13	4045	7.13
364	8	.01	1479	2.61	408	23	.04	2101	3.70	452	63	.11	4108	7.24
365	13	.02	1492	2.63	409	33	.06	2134	3.76	453	79	.14	4187	7.38
366	7	.01	1499	2.64	410	24	.04	2158	3.80	454	69	.12	4256	7.50
367	9	.02	1508	2.66	411	34	.06	2192	3.86	455	68	.12	4324	7.62
368	4	.01	1512	2.66	412	26	.05	2218	3.91	456	84	.15	4408	7.77
369	7	.01	1519	2.68	413	32	.06	2250	3.96	457	90	.16	4498	7.93
370	10	.02	1529	2.69	414	22	.04	2272	4.00	458	88	.16	4586	8.08
371	6	.01	1535	2.70	415	23	.04	2295	4.04	459	86	.15	4672	8.23
372	9	.02	1544	2.72	416	26	.05	2321	4.09	460	79	.14	4751	8.37
373	9	.02	1553	2.74	417	39	.07	2360	4.16	461	87	.15	4838	8.52
374	5	.01	1558	2.75	418	42	.07	2402	4.23	462	89	.16	4927	8.68
375	3	.01	1561	2.75	419	34	.06	2436	4.29	463	80	.14	5007	8.82
376	5	.01	1566	2.76	420	30	.05	2466	4.35	464	84	.15	5091	8.97
377	12	.02	1578	2.78	421	34	.06	2500	4.40	465	101	.18	5192	9.15
378	14	.02	1592	2.81	422	43	.08	2543	4.48	466	93	.16	5285	9.31
379	10	.02	1602	2.82	423	27	.05	2570	4.53	467	98	.17	5383	9.48
380	6	.01	1608	2.83	424	37	.07	2607	4.59	468	105	.19	5488	9.67
381	12	.02	1620	2.85	425	34	.06	2641	4.65	469	87	.15	5575	9.82
382	16	.03	1636	2.88	426	35	.06	2676	4.72	470	99	.17	5674	10.00
383	17	.03	1653	2.91	427	53	.09	2729	4.81	471	102	.18	5776	10.18

Appendix 24. Mathematics 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
472	113	.20	5889	10.38	517	193	.34	12905	22.74	562	308	.54	24881	43.84
473	80	.14	5969	10.52	518	219	.39	13124	23.12	563	321	.57	25202	44.41
474	118	.21	6087	10.73	519	186	.33	13310	23.45	564	289	.51	25491	44.91
475	145	.26	6232	10.98	520	232	.41	13542	23.86	565	294	.52	25785	45.43
476	106	.19	6338	11.17	521	220	.39	13762	24.25	566	312	.55	26097	45.98
477	109	.19	6447	11.36	522	237	.42	13999	24.67	567	307	.54	26404	46.52
478	131	.23	6578	11.59	523	224	.39	14223	25.06	568	300	.53	26704	47.05
479	129	.23	6707	11.82	524	233	.41	14456	25.47	569	314	.55	27018	47.61
480	122	.21	6829	12.03	525	243	.43	14699	25.90	570	324	.57	27342	48.18
481	126	.22	6955	12.25	526	220	.39	14919	26.29	571	337	.59	27679	48.77
482	127	.22	7082	12.48	527	237	.42	15156	26.70	572	338	.60	28017	49.37
483	112	.20	7194	12.68	528	239	.42	15395	27.13	573	329	.58	28346	49.95
484	111	.20	7305	12.87	529	246	.43	15641	27.56	574	300	.53	28646	50.47
485	134	.24	7439	13.11	530	257	.45	15898	28.01	575	333	.59	28979	51.06
486	140	.25	7579	13.35	531	225	.40	16123	28.41	576	334	.59	29313	51.65
487	124	.22	7703	13.57	532	261	.46	16384	28.87	577	330	.58	29643	52.23
488	139	.24	7842	13.82	533	224	.39	16608	29.26	578	364	.64	30007	52.87
489	148	.26	7990	14.08	534	248	.44	16856	29.70	579	321	.57	30328	53.44
490	143	.25	8133	14.33	535	264	.47	17120	30.17	580	336	.59	30664	54.03
491	141	.25	8274	14.58	536	226	.40	17346	30.56	581	330	.58	30994	54.61
492	153	.27	8427	14.85	537	234	.41	17580	30.98	582	347	.61	31341	55.22
493	142	.25	8569	15.10	538	278	.49	17858	31.47	583	351	.62	31692	55.84
494	169	.30	8738	15.40	539	260	.46	18118	31.92	584	357	.63	32049	56.47
495	174	.31	8912	15.70	540	272	.48	18390	32.40	585	331	.58	32380	57.05
496	177	.31	9089	16.01	541	251	.44	18641	32.85	586	301	.53	32681	57.58
497	158	.28	9247	16.29	542	283	.50	18924	33.34	587	313	.55	32994	58.14
498	149	.26	9396	16.56	543	297	.52	19221	33.87	588	334	.59	33328	58.72
499	158	.28	9554	16.83	544	288	.51	19509	34.37	589	358	.63	33686	59.35
500	157	.28	9711	17.11	545	280	.49	19789	34.87	590	341	.60	34027	59.96
501	164	.29	9875	17.40	546	283	.50	20072	35.37	591	343	.60	34370	60.56
502	169	.30	10044	17.70	547	261	.46	20333	35.83	592	296	.52	34666	61.08
503	161	.28	10205	17.98	548	301	.53	20634	36.36	593	356	.63	35022	61.71
504	176	.31	10381	18.29	549	286	.50	20920	36.86	594	314	.55	35336	62.26
505	189	.33	10570	18.62	550	295	.52	21215	37.38	595	350	.62	35686	62.88
506	193	.34	10763	18.96	551	295	.52	21510	37.90	596	351	.62	36037	63.50
507	160	.28	10923	19.25	552	287	.51	21797	38.41	597	339	.60	36376	64.09
508	191	.34	11114	19.58	553	267	.47	22064	38.88	598	322	.57	36698	64.66
509	185	.33	11299	19.91	554	292	.51	22356	39.39	599	315	.56	37013	65.22
510	225	.40	11524	20.31	555	298	.53	22654	39.92	600	316	.56	37329	65.77
511	192	.34	11716	20.64	556	332	.58	22986	40.50	601	366	.64	37695	66.42
512	165	.29	11881	20.93	557	314	.55	23300	41.05	602	315	.56	38010	66.97
513	197	.35	12078	21.28	558	323	.57	23623	41.62	603	334	.59	38344	67.56
514	217	.38	12295	21.66	559	306	.54	23929	42.16	604	343	.60	38687	68.17
515	214	.38	12509	22.04	560	327	.58	24256	42.74	605	314	.55	39001	68.72
516	203	.36	12712	22.40	561	317	.56	24573	43.30	606	313	.55	39314	69.27

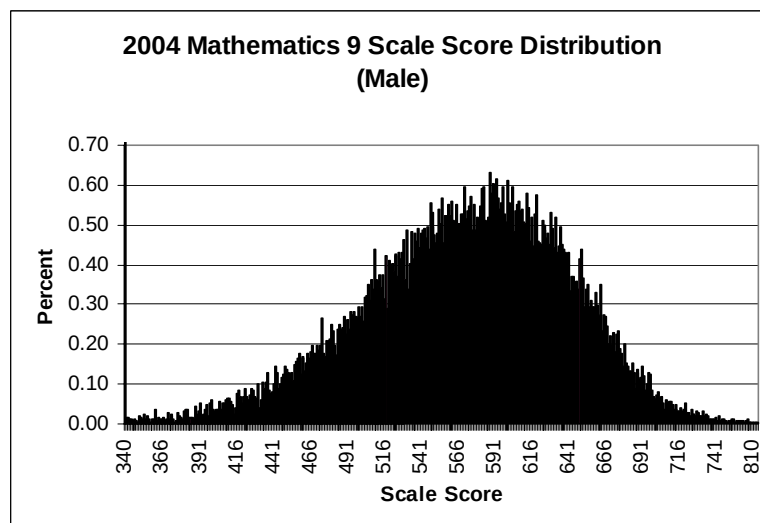
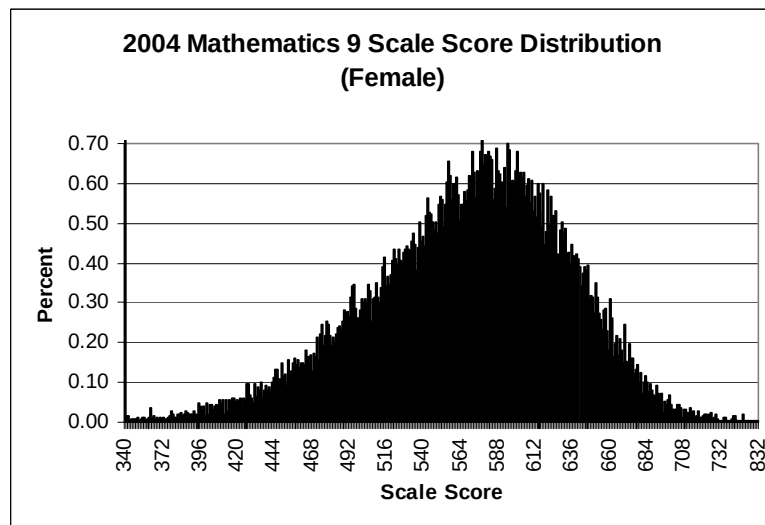
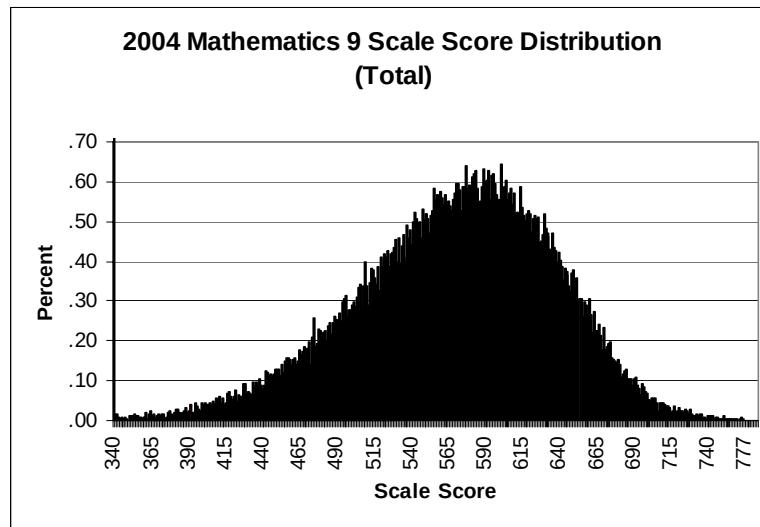
Appendix 24. Mathematics 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
607	324	.57	39638	69.84	652	204	.36	51328	90.44	697	48	.08	55920	98.53
608	332	.58	39970	70.43	653	172	.30	51500	90.74	698	40	.07	55960	98.60
609	308	.54	40278	70.97	654	174	.31	51674	91.05	699	39	.07	55999	98.67
610	325	.57	40603	71.54	655	173	.30	51847	91.35	700	29	.05	56028	98.72
611	295	.52	40898	72.06	656	149	.26	51996	91.62	701	30	.05	56058	98.77
612	297	.52	41195	72.59	657	168	.30	52164	91.91	702	28	.05	56086	98.82
613	289	.51	41484	73.09	658	164	.29	52328	92.20	703	33	.06	56119	98.88
614	334	.59	41818	73.68	659	148	.26	52476	92.46	704	31	.05	56150	98.94
615	304	.54	42122	74.22	660	146	.26	52622	92.72	705	32	.06	56182	98.99
616	293	.52	42415	74.73	661	173	.30	52795	93.02	706	25	.04	56207	99.04
617	286	.50	42701	75.24	662	150	.26	52945	93.29	707	13	.02	56220	99.06
618	295	.52	42996	75.76	663	126	.22	53071	93.51	708	26	.05	56246	99.10
619	276	.49	43272	76.24	664	156	.27	53227	93.79	709	24	.04	56270	99.15
620	300	.53	43572	76.77	665	128	.23	53355	94.01	710	24	.04	56294	99.19
621	295	.52	43867	77.29	666	127	.22	53482	94.23	711	23	.04	56317	99.23
622	270	.48	44137	77.77	667	137	.24	53619	94.48	712	21	.04	56338	99.27
623	288	.51	44425	78.28	668	121	.21	53740	94.69	713	21	.04	56359	99.30
624	292	.51	44717	78.79	669	100	.18	53840	94.87	714	21	.04	56380	99.34
625	288	.51	45005	79.30	670	133	.23	53973	95.10	715	18	.03	56398	99.37
626	289	.51	45294	79.81	671	100	.18	54073	95.28	716	12	.02	56410	99.39
627	253	.45	45547	80.25	672	105	.19	54178	95.46	717	13	.02	56423	99.42
628	256	.45	45803	80.70	673	107	.19	54285	95.65	718	20	.04	56443	99.45
629	264	.47	46067	81.17	674	110	.19	54395	95.84	719	12	.02	56455	99.47
630	294	.52	46361	81.69	675	112	.20	54507	96.04	720	14	.02	56469	99.50
631	274	.48	46635	82.17	676	88	.16	54595	96.20	721	19	.03	56488	99.53
632	263	.46	46898	82.63	677	86	.15	54681	96.35	722	13	.02	56501	99.55
633	267	.47	47165	83.10	678	84	.15	54765	96.50	723	14	.02	56515	99.58
634	244	.43	47409	83.53	679	82	.14	54847	96.64	724	8	.01	56523	99.59
635	240	.42	47649	83.96	680	86	.15	54933	96.79	725	15	.03	56538	99.62
636	267	.47	47916	84.43	681	79	.14	55012	96.93	726	14	.02	56552	99.64
637	247	.44	48163	84.86	682	62	.11	55074	97.04	727	9	.02	56561	99.66
638	242	.43	48405	85.29	683	67	.12	55141	97.16	728	9	.02	56570	99.68
639	225	.40	48630	85.69	684	71	.13	55212	97.28	729	15	.03	56585	99.70
640	239	.42	48869	86.11	685	73	.13	55285	97.41	730	10	.02	56595	99.72
641	229	.40	49098	86.51	686	59	.10	55344	97.52	731	7	.01	56602	99.73
642	219	.39	49317	86.90	687	53	.09	55397	97.61	732	7	.01	56609	99.74
643	200	.35	49517	87.25	688	60	.11	55457	97.71	733	10	.02	56619	99.76
644	216	.38	49733	87.63	689	59	.10	55516	97.82	734	6	.01	56625	99.77
645	213	.38	49946	88.00	690	51	.09	55567	97.91	735	10	.02	56635	99.79
646	207	.36	50153	88.37	691	59	.10	55626	98.01	736	9	.02	56644	99.81
647	192	.34	50345	88.71	692	62	.11	55688	98.12	737	5	.01	56649	99.81
648	184	.32	50529	89.03	693	51	.09	55739	98.21	738	4	.01	56653	99.82
649	209	.37	50738	89.40	694	45	.08	55784	98.29	739	3	.01	56656	99.83
650	215	.38	50953	89.78	695	36	.06	55820	98.35	740	6	.01	56662	99.84
651	171	.30	51124	90.08	696	52	.09	55872	98.45	741	7	.01	56669	99.85

Appendix 24. Mathematics 9 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
742	7	.01	56676	99.86	753	2	.00	56718	99.94	774	2	.00	56744	99.98
743	6	.01	56682	99.87	754	3	.01	56721	99.94	777	1	.00	56745	99.98
744	6	.01	56688	99.88	755	2	.00	56723	99.95	789	1	.00	56746	99.99
745	3	.01	56691	99.89	756	2	.00	56725	99.95	790	1	.00	56747	99.99
746	4	.01	56695	99.90	758	2	.00	56727	99.95	810	1	.00	56748	99.99
747	4	.01	56699	99.90	759	3	.01	56730	99.96	811	1	.00	56749	99.99
748	3	.01	56702	99.91	761	3	.01	56733	99.96	817	1	.00	56750	99.99
749	2	.00	56704	99.91	762	2	.00	56735	99.97	820	1	.00	56751	99.99
750	2	.00	56706	99.92	765	1	.00	56736	99.97	832	1	.00	56752	100.00
751	7	.01	56713	99.93	769	2	.00	56738	99.97	843	1	.00	56753	100.00
752	3	.01	56716	99.93	770	4	.01	56742	99.98	920	1	.00	56754	100.00

Figure 24. Mathematics 9 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 25. Reading 10 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
370	219	.43	219	0.43	427	4	.01	296	0.58	476	4	.01	448	0.88
371	1	.00	220	0.43	428	3	.01	299	0.59	477	3	.01	451	0.89
372	1	.00	221	0.44	429	2	.00	301	0.59	478	5	.01	456	0.90
373	1	.00	222	0.44	433	4	.01	305	0.60	479	5	.01	461	0.91
374	2	.00	224	0.44	434	1	.00	306	0.60	480	4	.01	465	0.92
376	2	.00	226	0.45	435	2	.00	308	0.61	481	5	.01	470	0.93
377	1	.00	227	0.45	436	2	.00	310	0.61	482	8	.02	478	0.94
378	1	.00	228	0.45	437	3	.01	313	0.62	483	4	.01	482	0.95
379	2	.00	230	0.45	438	5	.01	318	0.63	484	6	.01	488	0.96
382	1	.00	231	0.46	439	2	.00	320	0.63	485	4	.01	492	0.97
383	4	.01	235	0.46	440	2	.00	322	0.63	486	7	.01	499	0.98
384	1	.00	236	0.47	441	4	.01	326	0.64	487	7	.01	506	1.00
385	3	.01	239	0.47	442	4	.01	330	0.65	488	5	.01	511	1.01
386	1	.00	240	0.47	443	4	.01	334	0.66	489	8	.02	519	1.02
388	1	.00	241	0.48	444	3	.01	337	0.66	490	4	.01	523	1.03
389	4	.01	245	0.48	445	4	.01	341	0.67	491	4	.01	527	1.04
390	2	.00	247	0.49	446	4	.01	345	0.68	492	4	.01	531	1.05
391	1	.00	248	0.49	447	1	.00	346	0.68	493	5	.01	536	1.06
392	1	.00	249	0.49	448	7	.01	353	0.70	494	4	.01	540	1.06
393	1	.00	250	0.49	449	1	.00	354	0.70	495	4	.01	544	1.07
395	2	.00	252	0.50	450	3	.01	357	0.70	496	6	.01	550	1.08
398	1	.00	253	0.50	451	6	.01	363	0.72	497	7	.01	557	1.10
399	3	.01	256	0.50	452	2	.00	365	0.72	498	13	.03	570	1.12
401	4	.01	260	0.51	453	7	.01	372	0.73	499	2	.00	572	1.13
402	1	.00	261	0.51	454	6	.01	378	0.75	500	3	.01	575	1.13
403	1	.00	262	0.52	456	4	.01	382	0.75	501	7	.01	582	1.15
404	2	.00	264	0.52	457	4	.01	386	0.76	502	10	.02	592	1.17
406	1	.00	265	0.52	458	1	.00	387	0.76	503	5	.01	597	1.18
407	1	.00	266	0.52	459	4	.01	391	0.77	504	6	.01	603	1.19
408	2	.00	268	0.53	460	1	.00	392	0.77	505	9	.02	612	1.21
409	1	.00	269	0.53	461	1	.00	393	0.77	506	8	.02	620	1.22
410	3	.01	272	0.54	462	2	.00	395	0.78	507	10	.02	630	1.24
411	3	.01	275	0.54	463	1	.00	396	0.78	508	14	.03	644	1.27
412	1	.00	276	0.54	464	2	.00	398	0.78	509	4	.01	648	1.28
413	1	.00	277	0.55	465	5	.01	403	0.79	510	11	.02	659	1.30
416	2	.00	279	0.55	467	2	.00	405	0.80	511	10	.02	669	1.32
417	1	.00	280	0.55	468	5	.01	410	0.81	512	4	.01	673	1.33
418	1	.00	281	0.55	469	1	.00	411	0.81	513	9	.02	682	1.34
420	3	.01	284	0.56	470	5	.01	416	0.82	514	15	.03	697	1.37
421	1	.00	285	0.56	471	5	.01	421	0.83	515	6	.01	703	1.39
422	2	.00	287	0.57	472	4	.01	425	0.84	516	19	.04	722	1.42
424	3	.01	290	0.57	473	5	.01	430	0.85	517	7	.01	729	1.44
425	1	.00	291	0.57	474	7	.01	437	0.86	518	11	.02	740	1.46
426	1	.00	292	0.58	475	7	.01	444	0.88	519	6	.01	746	1.47

Appendix 25. Reading 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
520	22	.04	768	1.51	565	45	.09	1745	3.44	610	148	.29	5145	10.14
521	13	.03	781	1.54	566	43	.08	1788	3.53	611	137	.27	5282	10.42
522	13	.03	794	1.57	567	43	.08	1831	3.61	612	128	.25	5410	10.67
523	8	.02	802	1.58	568	41	.08	1872	3.69	613	144	.28	5554	10.95
524	9	.02	811	1.60	569	46	.09	1918	3.78	614	118	.23	5672	11.18
525	18	.04	829	1.63	570	51	.10	1969	3.88	615	143	.28	5815	11.47
526	13	.03	842	1.66	571	51	.10	2020	3.98	616	154	.30	5969	11.77
527	16	.03	858	1.69	572	53	.10	2073	4.09	617	137	.27	6106	12.04
528	19	.04	877	1.73	573	51	.10	2124	4.19	618	162	.32	6268	12.36
529	12	.02	889	1.75	574	48	.09	2172	4.28	619	152	.30	6420	12.66
530	18	.04	907	1.79	575	44	.09	2216	4.37	620	160	.32	6580	12.97
531	16	.03	923	1.82	576	54	.11	2270	4.48	621	169	.33	6749	13.31
532	14	.03	937	1.85	577	50	.10	2320	4.57	622	148	.29	6897	13.60
533	16	.03	953	1.88	578	54	.11	2374	4.68	623	157	.31	7054	13.91
534	6	.01	959	1.89	579	52	.10	2426	4.78	624	187	.37	7241	14.28
535	18	.04	977	1.93	580	65	.13	2491	4.91	625	157	.31	7398	14.59
536	18	.04	995	1.96	581	63	.12	2554	5.04	626	163	.32	7561	14.91
537	19	.04	1014	2.00	582	58	.11	2612	5.15	627	188	.37	7749	15.28
538	21	.04	1035	2.04	583	66	.13	2678	5.28	628	220	.43	7969	15.71
539	21	.04	1056	2.08	584	56	.11	2734	5.39	629	197	.39	8166	16.10
540	16	.03	1072	2.11	585	68	.13	2802	5.52	630	198	.39	8364	16.49
541	15	.03	1087	2.14	586	72	.14	2874	5.67	631	186	.37	8550	16.86
542	11	.02	1098	2.17	587	61	.12	2935	5.79	632	201	.40	8751	17.26
543	23	.05	1121	2.21	588	68	.13	3003	5.92	633	198	.39	8949	17.65
544	23	.05	1144	2.26	589	73	.14	3076	6.07	634	189	.37	9138	18.02
545	23	.05	1167	2.30	590	83	.16	3159	6.23	635	210	.41	9348	18.43
546	16	.03	1183	2.33	591	87	.17	3246	6.40	636	215	.42	9563	18.86
547	17	.03	1200	2.37	592	70	.14	3316	6.54	637	264	.52	9827	19.38
548	23	.05	1223	2.41	593	74	.15	3390	6.68	638	213	.42	10040	19.80
549	19	.04	1242	2.45	594	76	.15	3466	6.83	639	203	.40	10243	20.20
550	25	.05	1267	2.50	595	94	.19	3560	7.02	640	214	.42	10457	20.62
551	26	.05	1293	2.55	596	90	.18	3650	7.20	641	236	.47	10693	21.08
552	36	.07	1329	2.62	597	95	.19	3745	7.38	642	244	.48	10937	21.57
553	39	.08	1368	2.70	598	77	.15	3822	7.54	643	228	.45	11165	22.02
554	27	.05	1395	2.75	599	86	.17	3908	7.71	644	233	.46	11398	22.47
555	28	.06	1423	2.81	600	94	.19	4002	7.89	645	238	.47	11636	22.94
556	21	.04	1444	2.85	601	76	.15	4078	8.04	646	262	.52	11898	23.46
557	23	.05	1467	2.89	602	83	.16	4161	8.20	647	291	.57	12189	24.03
558	29	.06	1496	2.95	603	105	.21	4266	8.41	648	252	.50	12441	24.53
559	31	.06	1527	3.01	604	121	.24	4387	8.65	649	287	.57	12728	25.10
560	30	.06	1557	3.07	605	102	.20	4489	8.85	650	288	.57	13016	25.66
561	32	.06	1589	3.13	606	118	.23	4607	9.08	651	262	.52	13278	26.18
562	36	.07	1625	3.20	607	123	.24	4730	9.33	652	273	.54	13551	26.72
563	39	.08	1664	3.28	608	131	.26	4861	9.58	653	297	.59	13848	27.31
564	36	.07	1700	3.35	609	136	.27	4997	9.85	654	292	.58	14140	27.88

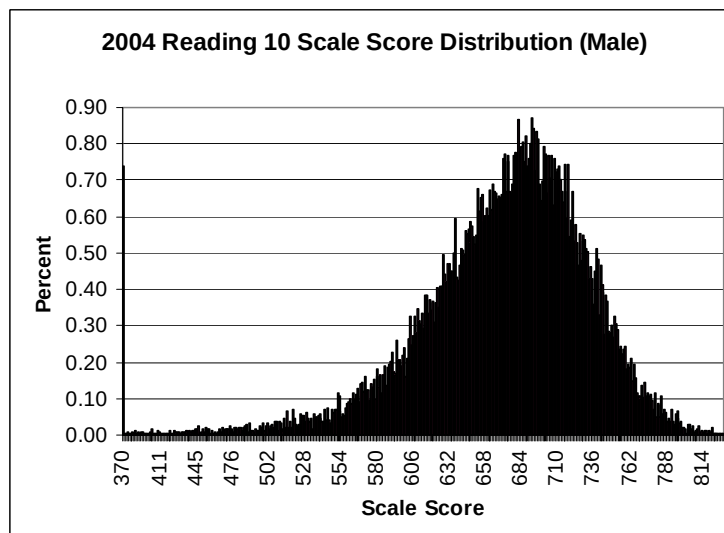
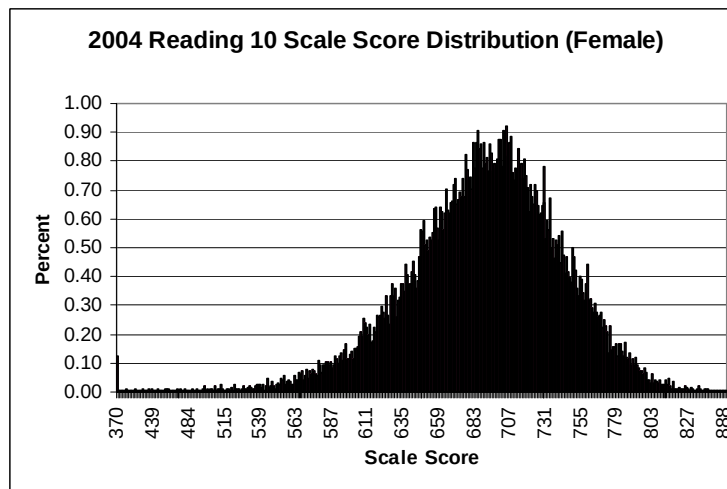
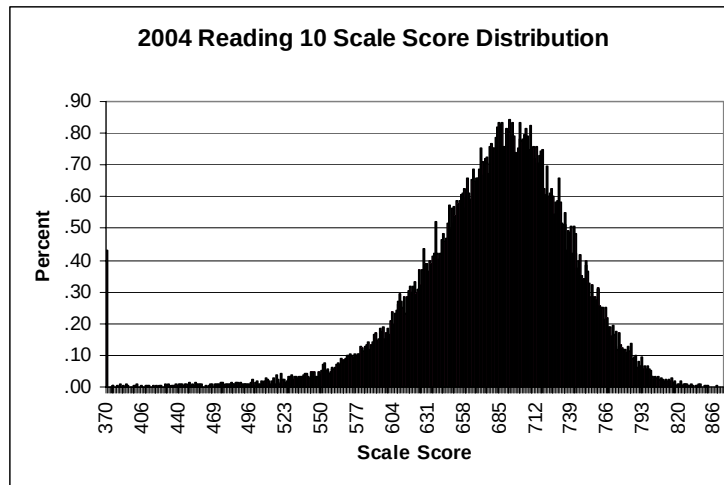
Appendix 25. Reading 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
655	299	.59	14439	28.47	700	422	.83	30960	61.05	745	202	.40	45244	89.21
656	307	.61	14746	29.08	701	397	.78	31357	61.83	746	212	.42	45456	89.63
657	310	.61	15056	29.69	702	394	.78	31751	62.61	747	178	.35	45634	89.98
658	316	.62	15372	30.31	703	397	.78	32148	63.39	748	172	.34	45806	90.32
659	302	.60	15674	30.91	704	404	.80	32552	64.19	749	173	.34	45979	90.66
660	287	.57	15961	31.47	705	412	.81	32964	65.00	750	194	.38	46173	91.04
661	334	.66	16295	32.13	706	402	.79	33366	65.79	751	201	.40	46374	91.44
662	311	.61	16606	32.74	707	379	.75	33745	66.54	752	184	.36	46558	91.80
663	300	.59	16906	33.34	708	417	.82	34162	67.36	753	165	.33	46723	92.13
664	332	.65	17238	33.99	709	375	.74	34537	68.10	754	144	.28	46867	92.41
665	348	.69	17586	34.68	710	371	.73	34908	68.83	755	163	.32	47030	92.73
666	328	.65	17914	35.32	711	385	.76	35293	69.59	756	144	.28	47174	93.02
667	321	.63	18235	35.96	712	364	.72	35657	70.31	757	143	.28	47317	93.30
668	333	.66	18568	36.61	713	384	.76	36041	71.07	758	140	.28	47457	93.58
669	334	.66	18902	37.27	714	358	.71	36399	71.77	759	156	.31	47613	93.88
670	349	.69	19251	37.96	715	371	.73	36770	72.50	760	158	.31	47771	94.20
671	381	.75	19632	38.71	716	376	.74	37146	73.24	761	129	.25	47900	94.45
672	361	.71	19993	39.42	717	356	.70	37502	73.95	762	128	.25	48028	94.70
673	339	.67	20332	40.09	718	379	.75	37881	74.69	763	127	.25	48155	94.95
674	366	.72	20698	40.81	719	318	.63	38199	75.32	764	107	.21	48262	95.16
675	367	.72	21065	41.54	720	308	.61	38507	75.93	765	127	.25	48389	95.41
676	358	.71	21423	42.24	721	352	.69	38859	76.62	766	110	.22	48499	95.63
677	340	.67	21763	42.91	722	306	.60	39165	77.23	767	96	.19	48595	95.82
678	384	.76	22147	43.67	723	311	.61	39476	77.84	768	94	.19	48689	96.01
679	390	.77	22537	44.44	724	316	.62	39792	78.46	769	96	.19	48785	96.19
680	383	.76	22920	45.19	725	295	.58	40087	79.04	770	82	.16	48867	96.36
681	381	.75	23301	45.94	726	304	.60	40391	79.64	771	98	.19	48965	96.55
682	398	.78	23699	46.73	727	277	.55	40668	80.19	772	84	.17	49049	96.71
683	416	.82	24115	47.55	728	296	.58	40964	80.77	773	90	.18	49139	96.89
684	397	.78	24512	48.33	729	299	.59	41263	81.36	774	61	.12	49200	97.01
685	423	.83	24935	49.17	730	334	.66	41597	82.02	775	87	.17	49287	97.18
686	421	.83	25356	50.00	731	296	.58	41893	82.60	776	64	.13	49351	97.31
687	422	.83	25778	50.83	732	262	.52	42155	83.12	777	67	.13	49418	97.44
688	385	.76	26163	51.59	733	259	.51	42414	83.63	778	63	.12	49481	97.57
689	385	.76	26548	52.35	734	260	.51	42674	84.14	779	60	.12	49541	97.69
690	412	.81	26960	53.16	735	279	.55	42953	84.69	780	61	.12	49602	97.81
691	404	.80	27364	53.96	736	218	.43	43171	85.12	781	55	.11	49657	97.91
692	427	.84	27791	54.80	737	249	.49	43420	85.62	782	64	.13	49721	98.04
693	408	.80	28199	55.60	738	248	.49	43668	86.10	783	57	.11	49778	98.15
694	401	.79	28600	56.39	739	256	.50	43924	86.61	784	44	.09	49822	98.24
695	422	.83	29022	57.23	740	213	.42	44137	87.03	785	70	.14	49892	98.38
696	400	.79	29422	58.01	741	256	.50	44393	87.53	786	45	.09	49937	98.47
697	375	.74	29797	58.75	742	213	.42	44606	87.95	787	47	.09	49984	98.56
698	360	.71	30157	59.46	743	246	.49	44852	88.44	788	50	.10	50034	98.66
699	381	.75	30538	60.21	744	190	.37	45042	88.81	789	32	.06	50066	98.72

Appendix 25. Reading 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
790	41	.08	50107	98.80	812	9	.02	50570	99.71	834	2	.00	50683	99.94
791	34	.07	50141	98.87	813	12	.02	50582	99.74	836	2	.00	50685	99.94
792	48	.09	50189	98.96	814	9	.02	50591	99.76	837	5	.01	50690	99.95
793	33	.07	50222	99.03	815	14	.03	50605	99.78	838	4	.01	50694	99.96
794	28	.06	50250	99.08	816	8	.02	50613	99.80	839	1	.00	50695	99.96
795	33	.07	50283	99.15	817	5	.01	50618	99.81	840	1	.00	50696	99.96
796	30	.06	50313	99.21	818	10	.02	50628	99.83	841	2	.00	50698	99.97
797	33	.07	50346	99.27	819	2	.00	50630	99.83	845	2	.00	50700	99.97
798	29	.06	50375	99.33	820	5	.01	50635	99.84	852	2	.00	50702	99.97
799	27	.05	50402	99.38	821	4	.01	50639	99.85	854	1	.00	50703	99.98
800	16	.03	50418	99.41	822	9	.02	50648	99.87	858	1	.00	50704	99.98
801	16	.03	50434	99.45	823	3	.01	50651	99.87	860	1	.00	50705	99.98
802	12	.02	50446	99.47	824	4	.01	50655	99.88	863	1	.00	50706	99.98
803	17	.03	50463	99.50	825	4	.01	50659	99.89	866	1	.00	50707	99.98
804	15	.03	50478	99.53	826	5	.01	50664	99.90	867	1	.00	50708	99.99
805	17	.03	50495	99.57	827	4	.01	50668	99.91	869	2	.00	50710	99.99
806	13	.03	50508	99.59	828	2	.00	50670	99.91	872	1	.00	50711	99.99
807	14	.03	50522	99.62	829	2	.00	50672	99.92	883	1	.00	50712	99.99
808	12	.02	50534	99.64	830	4	.01	50676	99.92	888	1	.00	50713	100.00
809	9	.02	50543	99.66	831	2	.00	50678	99.93	892	1	.00	50714	100.00
810	7	.01	50550	99.67	832	1	.00	50679	99.93	917	1	.00	50715	100.00
811	11	.02	50561	99.70	833	2	.00	50681	99.93					

Figure 25. Reading 10 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 26. Writing 10 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
270	45	.09	45	0.09	346	2	.00	133	0.26	390	15	.03	514	1.01
271	1	.00	46	0.09	347	3	.01	136	0.27	391	14	.03	528	1.04
272	3	.01	49	0.10	348	5	.01	141	0.28	392	11	.02	539	1.06
274	1	.00	50	0.10	349	2	.00	143	0.28	393	17	.03	556	1.10
276	1	.00	51	0.10	350	3	.01	146	0.29	394	20	.04	576	1.13
282	2	.00	53	0.10	351	9	.02	155	0.31	395	13	.03	589	1.16
284	1	.00	54	0.11	352	2	.00	157	0.31	396	18	.04	607	1.20
287	1	.00	55	0.11	353	3	.01	160	0.32	397	20	.04	627	1.24
291	2	.00	57	0.11	354	7	.01	167	0.33	398	16	.03	643	1.27
292	1	.00	58	0.11	355	8	.02	175	0.34	399	20	.04	663	1.31
295	1	.00	59	0.12	356	2	.00	177	0.35	400	15	.03	678	1.34
296	1	.00	60	0.12	357	5	.01	182	0.36	401	15	.03	693	1.37
297	1	.00	61	0.12	358	2	.00	184	0.36	402	19	.04	712	1.40
300	1	.00	62	0.12	359	8	.02	192	0.38	403	18	.04	730	1.44
304	2	.00	64	0.13	360	6	.01	198	0.39	404	25	.05	755	1.49
306	3	.01	67	0.13	361	6	.01	204	0.40	405	32	.06	787	1.55
307	1	.00	68	0.13	362	7	.01	211	0.42	406	18	.04	805	1.59
308	1	.00	69	0.14	363	3	.01	214	0.42	407	25	.05	830	1.64
310	1	.00	70	0.14	364	10	.02	224	0.44	408	27	.05	857	1.69
312	1	.00	71	0.14	365	9	.02	233	0.46	409	28	.06	885	1.74
315	2	.00	73	0.14	366	6	.01	239	0.47	410	23	.05	908	1.79
318	2	.00	75	0.15	367	6	.01	245	0.48	411	27	.05	935	1.84
321	2	.00	77	0.15	368	9	.02	254	0.50	412	25	.05	960	1.89
322	2	.00	79	0.16	369	7	.01	261	0.51	413	24	.05	984	1.94
324	1	.00	80	0.16	370	14	.03	275	0.54	414	23	.05	1007	1.98
325	1	.00	81	0.16	371	12	.02	287	0.57	415	21	.04	1028	2.03
326	2	.00	83	0.16	372	7	.01	294	0.58	416	22	.04	1050	2.07
327	2	.00	85	0.17	373	8	.02	302	0.60	417	31	.06	1081	2.13
328	2	.00	87	0.17	374	11	.02	313	0.62	418	24	.05	1105	2.18
331	1	.00	88	0.17	375	17	.03	330	0.65	419	39	.08	1144	2.25
332	1	.00	89	0.18	376	13	.03	343	0.68	420	33	.07	1177	2.32
333	2	.00	91	0.18	377	11	.02	354	0.70	421	37	.07	1214	2.39
334	4	.01	95	0.19	378	16	.03	370	0.73	422	42	.08	1256	2.47
335	7	.01	102	0.20	379	12	.02	382	0.75	423	36	.07	1292	2.55
336	4	.01	106	0.21	380	7	.01	389	0.77	424	25	.05	1317	2.59
337	1	.00	107	0.21	381	11	.02	400	0.79	425	36	.07	1353	2.67
338	2	.00	109	0.21	382	13	.03	413	0.81	426	34	.07	1387	2.73
339	5	.01	114	0.22	383	18	.04	431	0.85	427	40	.08	1427	2.81
340	5	.01	119	0.23	384	9	.02	440	0.87	428	31	.06	1458	2.87
341	3	.01	122	0.24	385	18	.04	458	0.90	429	37	.07	1495	2.95
342	3	.01	125	0.25	386	8	.02	466	0.92	430	30	.06	1525	3.00
343	3	.01	128	0.25	387	8	.02	474	0.93	431	48	.09	1573	3.10
344	1	.00	129	0.25	388	14	.03	488	0.96	432	37	.07	1610	3.17
345	2	.00	131	0.26	389	11	.02	499	0.98	433	36	.07	1646	3.24

Appendix 26. Writing 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
434	45	.09	1691	3.33	479	105	.21	4968	9.79	524	182	.36	11550	22.76
435	49	.10	1740	3.43	480	103	.20	5071	9.99	525	194	.38	11744	23.14
436	58	.11	1798	3.54	481	109	.21	5180	10.21	526	187	.37	11931	23.51
437	46	.09	1844	3.63	482	98	.19	5278	10.40	527	198	.39	12129	23.90
438	40	.08	1884	3.71	483	106	.21	5384	10.61	528	208	.41	12337	24.31
439	46	.09	1930	3.80	484	119	.23	5503	10.84	529	200	.39	12537	24.70
440	50	.10	1980	3.90	485	116	.23	5619	11.07	530	193	.38	12730	25.08
441	50	.10	2030	4.00	486	113	.22	5732	11.29	531	180	.35	12910	25.44
442	60	.12	2090	4.12	487	134	.26	5866	11.56	532	198	.39	13108	25.83
443	52	.10	2142	4.22	488	112	.22	5978	11.78	533	211	.42	13319	26.24
444	46	.09	2188	4.31	489	124	.24	6102	12.02	534	198	.39	13517	26.63
445	59	.12	2247	4.43	490	105	.21	6207	12.23	535	201	.40	13718	27.03
446	59	.12	2306	4.54	491	118	.23	6325	12.46	536	209	.41	13927	27.44
447	55	.11	2361	4.65	492	112	.22	6437	12.68	537	190	.37	14117	27.81
448	61	.12	2422	4.77	493	116	.23	6553	12.91	538	218	.43	14335	28.24
449	60	.12	2482	4.89	494	118	.23	6671	13.14	539	226	.45	14561	28.69
450	63	.12	2545	5.01	495	106	.21	6777	13.35	540	235	.46	14796	29.15
451	59	.12	2604	5.13	496	147	.29	6924	13.64	541	236	.46	15032	29.62
452	76	.15	2680	5.28	497	122	.24	7046	13.88	542	226	.45	15258	30.06
453	61	.12	2741	5.40	498	149	.29	7195	14.18	543	206	.41	15464	30.47
454	72	.14	2813	5.54	499	169	.33	7364	14.51	544	237	.47	15701	30.93
455	85	.17	2898	5.71	500	141	.28	7505	14.79	545	222	.44	15923	31.37
456	69	.14	2967	5.85	501	160	.32	7665	15.10	546	240	.47	16163	31.84
457	78	.15	3045	6.00	502	144	.28	7809	15.39	547	244	.48	16407	32.33
458	75	.15	3120	6.15	503	159	.31	7968	15.70	548	225	.44	16632	32.77
459	73	.14	3193	6.29	504	144	.28	8112	15.98	549	238	.47	16870	33.24
460	63	.12	3256	6.42	505	158	.31	8270	16.29	550	213	.42	17083	33.66
461	63	.12	3319	6.54	506	164	.32	8434	16.62	551	271	.53	17354	34.19
462	86	.17	3405	6.71	507	169	.33	8603	16.95	552	252	.50	17606	34.69
463	87	.17	3492	6.88	508	131	.26	8734	17.21	553	267	.53	17873	35.21
464	92	.18	3584	7.06	509	164	.32	8898	17.53	554	255	.50	18128	35.72
465	72	.14	3656	7.20	510	162	.32	9060	17.85	555	256	.50	18384	36.22
466	97	.19	3753	7.39	511	170	.33	9230	18.19	556	255	.50	18639	36.72
467	83	.16	3836	7.56	512	165	.33	9395	18.51	557	240	.47	18879	37.20
468	81	.16	3917	7.72	513	167	.33	9562	18.84	558	244	.48	19123	37.68
469	86	.17	4003	7.89	514	164	.32	9726	19.16	559	272	.54	19395	38.21
470	97	.19	4100	8.08	515	173	.34	9899	19.50	560	249	.49	19644	38.70
471	96	.19	4196	8.27	516	185	.36	10084	19.87	561	255	.50	19899	39.21
472	106	.21	4302	8.48	517	165	.33	10249	20.19	562	256	.50	20155	39.71
473	94	.19	4396	8.66	518	171	.34	10420	20.53	563	247	.49	20402	40.20
474	94	.19	4490	8.85	519	197	.39	10617	20.92	564	293	.58	20695	40.77
475	94	.19	4584	9.03	520	162	.32	10779	21.24	565	264	.52	20959	41.29
476	88	.17	4672	9.20	521	182	.36	10961	21.60	566	263	.52	21222	41.81
477	83	.16	4755	9.37	522	197	.39	11158	21.98	567	251	.49	21473	42.31
478	108	.21	4863	9.58	523	210	.41	11368	22.40	568	339	.67	21812	42.97

Appendix 26. Writing 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
569	296	.58	22108	43.56	614	253	.50	34748	68.46	659	160	.32	43973	86.64
570	285	.56	22393	44.12	615	293	.58	35041	69.04	660	162	.32	44135	86.96
571	282	.56	22675	44.67	616	249	.49	35290	69.53	661	148	.29	44283	87.25
572	278	.55	22953	45.22	617	266	.52	35556	70.05	662	142	.28	44425	87.53
573	250	.49	23203	45.71	618	238	.47	35794	70.52	663	145	.29	44570	87.81
574	278	.55	23481	46.26	619	239	.47	36033	70.99	664	124	.24	44694	88.06
575	311	.61	23792	46.88	620	201	.40	36234	71.39	665	112	.22	44806	88.28
576	297	.59	24089	47.46	621	220	.43	36454	71.82	666	140	.28	44946	88.55
577	270	.53	24359	47.99	622	251	.49	36705	72.32	667	130	.26	45076	88.81
578	280	.55	24639	48.54	623	236	.46	36941	72.78	668	129	.25	45205	89.06
579	314	.62	24953	49.16	624	217	.43	37158	73.21	669	125	.25	45330	89.31
580	264	.52	25217	49.68	625	274	.54	37432	73.75	670	136	.27	45466	89.58
581	288	.57	25505	50.25	626	241	.47	37673	74.22	671	138	.27	45604	89.85
582	277	.55	25782	50.80	627	221	.44	37894	74.66	672	132	.26	45736	90.11
583	251	.49	26033	51.29	628	247	.49	38141	75.15	673	125	.25	45861	90.36
584	266	.52	26299	51.81	629	219	.43	38360	75.58	674	124	.24	45985	90.60
585	305	.60	26604	52.42	630	197	.39	38557	75.97	675	123	.24	46108	90.84
586	275	.54	26879	52.96	631	229	.45	38786	76.42	676	122	.24	46230	91.08
587	301	.59	27180	53.55	632	206	.41	38992	76.82	677	101	.20	46331	91.28
588	280	.55	27460	54.10	633	240	.47	39232	77.30	678	133	.26	46464	91.54
589	301	.59	27761	54.70	634	205	.40	39437	77.70	679	110	.22	46574	91.76
590	301	.59	28062	55.29	635	210	.41	39647	78.11	680	104	.20	46678	91.97
591	290	.57	28352	55.86	636	209	.41	39856	78.52	681	107	.21	46785	92.18
592	297	.59	28649	56.44	637	204	.40	40060	78.93	682	82	.16	46867	92.34
593	281	.55	28930	57.00	638	212	.42	40272	79.34	683	89	.18	46956	92.51
594	306	.60	29236	57.60	639	208	.41	40480	79.75	684	104	.20	47060	92.72
595	283	.56	29519	58.16	640	188	.37	40668	80.12	685	98	.19	47158	92.91
596	286	.56	29805	58.72	641	215	.42	40883	80.55	686	77	.15	47235	93.06
597	250	.49	30055	59.21	642	209	.41	41092	80.96	687	93	.18	47328	93.25
598	276	.54	30331	59.76	643	194	.38	41286	81.34	688	93	.18	47421	93.43
599	256	.50	30587	60.26	644	168	.33	41454	81.67	689	77	.15	47498	93.58
600	273	.54	30860	60.80	645	186	.37	41640	82.04	690	76	.15	47574	93.73
601	312	.61	31172	61.42	646	183	.36	41823	82.40	691	73	.14	47647	93.87
602	300	.59	31472	62.01	647	185	.36	42008	82.76	692	79	.16	47726	94.03
603	280	.55	31752	62.56	648	175	.34	42183	83.11	693	84	.17	47810	94.20
604	286	.56	32038	63.12	649	168	.33	42351	83.44	694	72	.14	47882	94.34
605	261	.51	32299	63.64	650	160	.32	42511	83.76	695	75	.15	47957	94.49
606	291	.57	32590	64.21	651	167	.33	42678	84.08	696	68	.13	48025	94.62
607	256	.50	32846	64.71	652	160	.32	42838	84.40	697	80	.16	48105	94.78
608	284	.56	33130	65.27	653	193	.38	43031	84.78	698	65	.13	48170	94.91
609	262	.52	33392	65.79	654	154	.30	43185	85.08	699	63	.12	48233	95.03
610	286	.56	33678	66.35	655	138	.27	43323	85.36	700	65	.13	48298	95.16
611	270	.53	33948	66.88	656	161	.32	43484	85.67	701	85	.17	48383	95.32
612	295	.58	34243	67.47	657	165	.33	43649	86.00	702	73	.14	48456	95.47
613	252	.50	34495	67.96	658	164	.32	43813	86.32	703	71	.14	48527	95.61

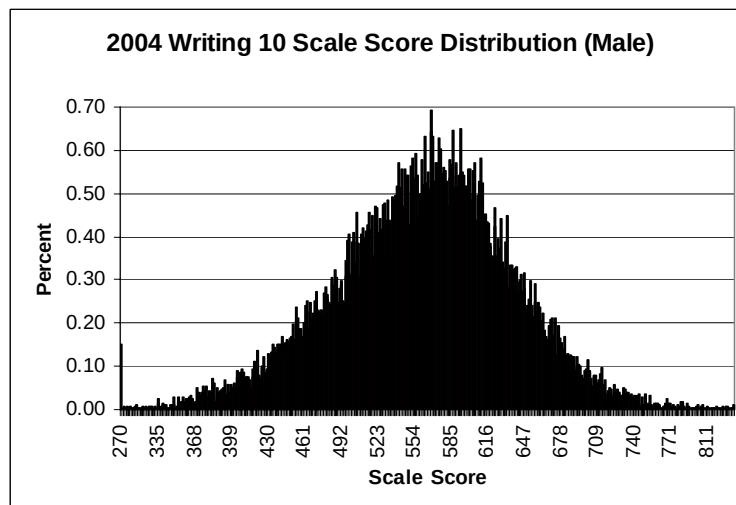
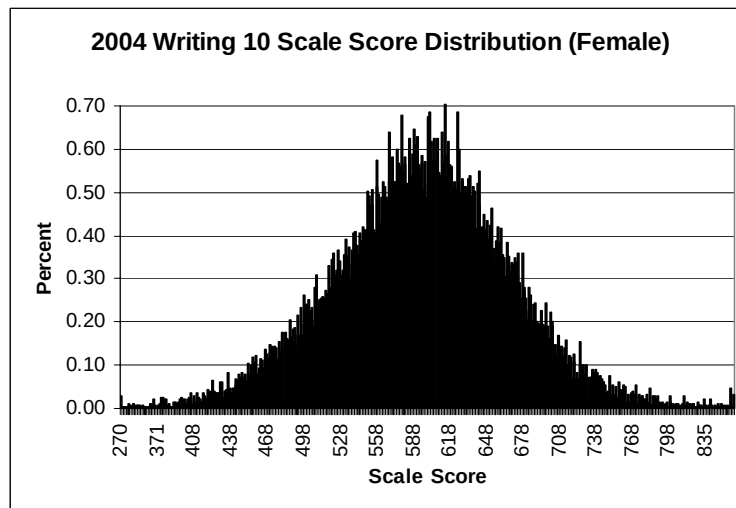
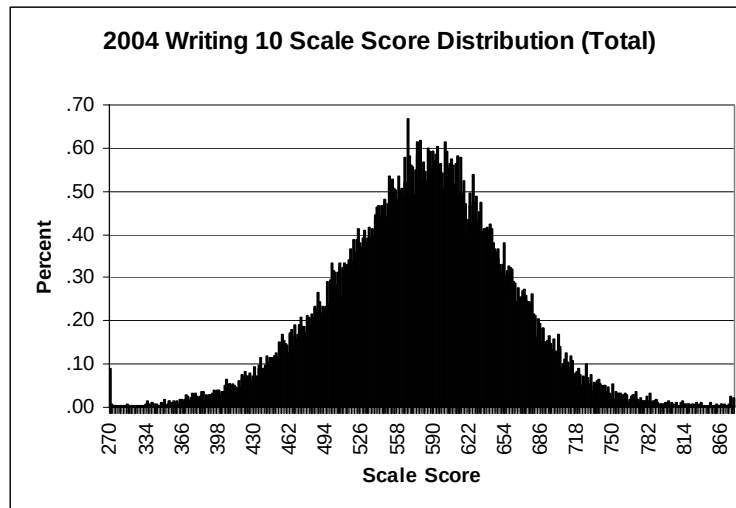
Appendix 26. Writing 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
704	47	.09	48574	95.70	749	13	.03	50108	98.72	794	3	.01	50561	99.62
705	51	.10	48625	95.80	750	28	.06	50136	98.78	795	4	.01	50565	99.62
706	51	.10	48676	95.90	751	10	.02	50146	98.80	796	3	.01	50568	99.63
707	56	.11	48732	96.01	752	18	.04	50164	98.83	797	5	.01	50573	99.64
708	63	.12	48795	96.14	753	9	.02	50173	98.85	798	3	.01	50576	99.65
709	47	.09	48842	96.23	754	16	.03	50189	98.88	799	7	.01	50583	99.66
710	53	.10	48895	96.33	755	16	.03	50205	98.91	800	5	.01	50588	99.67
711	46	.09	48941	96.42	756	8	.02	50213	98.93	801	2	.00	50590	99.67
712	48	.09	48989	96.52	757	16	.03	50229	98.96	802	6	.01	50596	99.68
713	60	.12	49049	96.64	758	15	.03	50244	98.99	803	2	.00	50598	99.69
714	55	.11	49104	96.75	759	12	.02	50256	99.01	804	3	.01	50601	99.69
715	36	.07	49140	96.82	760	14	.03	50270	99.04	805	2	.00	50603	99.70
716	37	.07	49177	96.89	761	17	.03	50287	99.08	806	5	.01	50608	99.71
717	40	.08	49217	96.97	762	15	.03	50302	99.11	807	5	.01	50613	99.72
718	41	.08	49258	97.05	763	5	.01	50307	99.12	808	1	.00	50614	99.72
719	23	.05	49281	97.09	764	5	.01	50312	99.13	809	2	.00	50616	99.72
720	45	.09	49326	97.18	765	10	.02	50322	99.14	810	2	.00	50618	99.73
721	39	.08	49365	97.26	766	6	.01	50328	99.16	811	5	.01	50623	99.74
722	25	.05	49390	97.31	767	12	.02	50340	99.18	812	8	.02	50631	99.75
723	36	.07	49426	97.38	768	15	.03	50355	99.21	813	3	.01	50634	99.76
724	27	.05	49453	97.43	769	14	.03	50369	99.24	814	4	.01	50638	99.77
725	31	.06	49484	97.49	770	11	.02	50380	99.26	815	4	.01	50642	99.78
726	51	.10	49535	97.59	771	18	.04	50398	99.29	816	4	.01	50646	99.78
727	32	.06	49567	97.66	772	9	.02	50407	99.31	817	4	.01	50650	99.79
728	35	.07	49602	97.73	773	5	.01	50412	99.32	818	3	.01	50653	99.80
729	28	.06	49630	97.78	774	11	.02	50423	99.34	819	1	.00	50654	99.80
730	26	.05	49656	97.83	775	8	.02	50431	99.36	821	3	.01	50657	99.80
731	38	.07	49694	97.91	776	8	.02	50439	99.38	823	3	.01	50660	99.81
732	18	.04	49712	97.94	777	8	.02	50447	99.39	825	1	.00	50661	99.81
733	30	.06	49742	98.00	778	8	.02	50455	99.41	826	1	.00	50662	99.81
734	28	.06	49770	98.06	779	7	.01	50462	99.42	827	1	.00	50663	99.82
735	24	.05	49794	98.10	780	13	.03	50475	99.45	829	6	.01	50669	99.83
736	31	.06	49825	98.17	781	2	.00	50477	99.45	831	2	.00	50671	99.83
737	29	.06	49854	98.22	782	8	.02	50485	99.47	832	3	.01	50674	99.84
738	32	.06	49886	98.29	783	17	.03	50502	99.50	833	1	.00	50675	99.84
739	28	.06	49914	98.34	784	2	.00	50504	99.50	834	5	.01	50680	99.85
740	24	.05	49938	98.39	785	5	.01	50509	99.51	835	1	.00	50681	99.85
741	26	.05	49964	98.44	786	7	.01	50516	99.53	836	2	.00	50683	99.86
742	23	.05	49987	98.48	787	8	.02	50524	99.54	837	1	.00	50684	99.86
743	25	.05	50012	98.53	788	9	.02	50533	99.56	838	1	.00	50685	99.86
744	18	.04	50030	98.57	789	9	.02	50542	99.58	839	1	.00	50686	99.86
745	24	.05	50054	98.62	790	5	.01	50547	99.59	840	2	.00	50688	99.87
746	15	.03	50069	98.65	791	4	.01	50551	99.60	841	2	.00	50690	99.87
747	16	.03	50085	98.68	792	3	.01	50554	99.60	843	5	.01	50695	99.88
748	10	.02	50095	98.70	793	4	.01	50558	99.61	846	2	.00	50697	99.88

Appendix 26. Writing 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %	SS	Freq.	%	Cum. Freq.	Cum. %
847	1	.00	50698	99.89	866	4	.01	50713	99.92	887	3	.01	50727	99.94
849	2	.00	50700	99.89	867	3	.01	50716	99.92	897	1	.00	50728	99.94
854	1	.00	50701	99.89	870	1	.00	50717	99.92	909	13	.03	50741	99.97
855	1	.00	50702	99.89	872	3	.01	50720	99.93	917	2	.00	50743	99.97
858	4	.01	50706	99.90	874	1	.00	50721	99.93	928	2	.00	50745	99.98
861	2	.00	50708	99.91	875	1	.00	50722	99.93	950	11	.02	50756	100.00
862	1	.00	50709	99.91	880	2	.00	50724	99.94					

Figure 26. Writing 10 Scale Score Distributions for the Total Population, Female, and Male Students



Appendix 27. Mathematics 10 Scale Score Distribution

(SS = Scale Score, Freq. = Frequency, Cum. = Cumulative)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
370	980	1.9	980	1.93	414	25	.0	1745	3.44	458	56	.1	3369	6.63
371	13	.0	993	1.95	415	23	.0	1768	3.48	459	58	.1	3427	6.75
372	21	.0	1014	2.00	416	19	.0	1787	3.52	460	46	.1	3473	6.84
373	14	.0	1028	2.02	417	25	.0	1812	3.57	461	57	.1	3530	6.95
374	16	.0	1044	2.06	418	21	.0	1833	3.61	462	52	.1	3582	7.05
375	13	.0	1057	2.08	419	20	.0	1853	3.65	463	49	.1	3631	7.15
376	18	.0	1075	2.12	420	23	.0	1876	3.69	464	61	.1	3692	7.27
377	16	.0	1091	2.15	421	22	.0	1898	3.74	465	65	.1	3757	7.40
378	14	.0	1105	2.18	422	29	.1	1927	3.79	466	57	.1	3814	7.51
379	14	.0	1119	2.20	423	25	.0	1952	3.84	467	72	.1	3886	7.65
380	13	.0	1132	2.23	424	26	.1	1978	3.89	468	67	.1	3953	7.78
381	13	.0	1145	2.25	425	26	.1	2004	3.95	469	65	.1	4018	7.91
382	10	.0	1155	2.27	426	27	.1	2031	4.00	470	82	.2	4100	8.07
383	15	.0	1170	2.30	427	22	.0	2053	4.04	471	55	.1	4155	8.18
384	18	.0	1188	2.34	428	26	.1	2079	4.09	472	76	.1	4231	8.33
385	14	.0	1202	2.37	429	30	.1	2109	4.15	473	97	.2	4328	8.52
386	9	.0	1211	2.38	430	33	.1	2142	4.22	474	67	.1	4395	8.65
387	13	.0	1224	2.41	431	31	.1	2173	4.28	475	72	.1	4467	8.79
388	13	.0	1237	2.44	432	41	.1	2214	4.36	476	71	.1	4538	8.93
389	16	.0	1253	2.47	433	29	.1	2243	4.42	477	67	.1	4605	9.07
390	9	.0	1262	2.48	434	40	.1	2283	4.49	478	72	.1	4677	9.21
391	11	.0	1273	2.51	435	27	.1	2310	4.55	479	83	.2	4760	9.37
392	20	.0	1293	2.55	436	34	.1	2344	4.61	480	83	.2	4843	9.53
393	18	.0	1311	2.58	437	43	.1	2387	4.70	481	84	.2	4927	9.70
394	15	.0	1326	2.61	438	30	.1	2417	4.76	482	82	.2	5009	9.86
395	15	.0	1341	2.64	439	29	.1	2446	4.82	483	86	.2	5095	10.03
396	14	.0	1355	2.67	440	41	.1	2487	4.90	484	78	.2	5173	10.18
397	19	.0	1374	2.70	441	43	.1	2530	4.98	485	77	.2	5250	10.34
398	23	.0	1397	2.75	442	41	.1	2571	5.06	486	76	.1	5326	10.48
399	23	.0	1420	2.80	443	52	.1	2623	5.16	487	88	.2	5414	10.66
400	15	.0	1435	2.82	444	36	.1	2659	5.23	488	103	.2	5517	10.86
401	18	.0	1453	2.86	445	53	.1	2712	5.34	489	98	.2	5615	11.05
402	26	.1	1479	2.91	446	50	.1	2762	5.44	490	97	.2	5712	11.24
403	19	.0	1498	2.95	447	52	.1	2814	5.54	491	89	.2	5801	11.42
404	18	.0	1516	2.98	448	53	.1	2867	5.64	492	103	.2	5904	11.62
405	21	.0	1537	3.03	449	42	.1	2909	5.73	493	118	.2	6022	11.85
406	20	.0	1557	3.07	450	50	.1	2959	5.83	494	95	.2	6117	12.04
407	15	.0	1572	3.09	451	54	.1	3013	5.93	495	90	.2	6207	12.22
408	24	.0	1596	3.14	452	42	.1	3055	6.01	496	113	.2	6320	12.44
409	28	.1	1624	3.20	453	54	.1	3109	6.12	497	114	.2	6434	12.67
410	28	.1	1652	3.25	454	57	.1	3166	6.23	498	103	.2	6537	12.87
411	24	.0	1676	3.30	455	49	.1	3215	6.33	499	112	.2	6649	13.09
412	24	.0	1700	3.35	456	48	.1	3263	6.42	500	125	.2	6774	13.34
413	20	.0	1720	3.39	457	50	.1	3313	6.52	501	121	.2	6895	13.57

Appendix 27. Mathematics 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
502	107	.2	7002	13.78	547	216	.4	14520	28.58	592	294	.6	26695	52.55
503	129	.3	7131	14.04	548	226	.4	14746	29.03	593	302	.6	26997	53.15
504	118	.2	7249	14.27	549	231	.5	14977	29.48	594	321	.6	27318	53.78
505	130	.3	7379	14.53	550	225	.4	15202	29.93	595	280	.6	27598	54.33
506	125	.2	7504	14.77	551	244	.5	15446	30.41	596	298	.6	27896	54.92
507	121	.2	7625	15.01	552	260	.5	15706	30.92	597	304	.6	28200	55.51
508	145	.3	7770	15.30	553	251	.5	15957	31.41	598	307	.6	28507	56.12
509	115	.2	7885	15.52	554	265	.5	16222	31.93	599	298	.6	28805	56.70
510	123	.2	8008	15.76	555	221	.4	16443	32.37	600	270	.5	29075	57.24
511	131	.3	8139	16.02	556	246	.5	16689	32.85	601	302	.6	29377	57.83
512	142	.3	8281	16.30	557	260	.5	16949	33.37	602	272	.5	29649	58.37
513	143	.3	8424	16.58	558	229	.5	17178	33.82	603	323	.6	29972	59.00
514	154	.3	8578	16.89	559	275	.5	17453	34.36	604	305	.6	30277	59.60
515	122	.2	8700	17.13	560	243	.5	17696	34.84	605	292	.6	30569	60.18
516	134	.3	8834	17.39	561	255	.5	17951	35.34	606	342	.7	30911	60.85
517	147	.3	8981	17.68	562	272	.5	18223	35.87	607	294	.6	31205	61.43
518	138	.3	9119	17.95	563	257	.5	18480	36.38	608	276	.5	31481	61.97
519	176	.3	9295	18.30	564	256	.5	18736	36.88	609	285	.6	31766	62.53
520	137	.3	9432	18.57	565	268	.5	19004	37.41	610	328	.6	32094	63.18
521	135	.3	9567	18.83	566	300	.6	19304	38.00	611	283	.6	32377	63.74
522	175	.3	9742	19.18	567	237	.5	19541	38.47	612	310	.6	32687	64.35
523	159	.3	9901	19.49	568	294	.6	19835	39.05	613	300	.6	32987	64.94
524	150	.3	10051	19.79	569	255	.5	20090	39.55	614	337	.7	33324	65.60
525	154	.3	10205	20.09	570	266	.5	20356	40.07	615	296	.6	33620	66.18
526	175	.3	10380	20.43	571	272	.5	20628	40.61	616	321	.6	33941	66.82
527	181	.4	10561	20.79	572	260	.5	20888	41.12	617	307	.6	34248	67.42
528	153	.3	10714	21.09	573	261	.5	21149	41.63	618	276	.5	34524	67.96
529	201	.4	10915	21.49	574	252	.5	21401	42.13	619	255	.5	34779	68.47
530	171	.3	11086	21.82	575	279	.5	21680	42.68	620	287	.6	35066	69.03
531	186	.4	11272	22.19	576	313	.6	21993	43.30	621	285	.6	35351	69.59
532	179	.4	11451	22.54	577	298	.6	22291	43.88	622	285	.6	35636	70.15
533	211	.4	11662	22.96	578	289	.6	22580	44.45	623	292	.6	35928	70.73
534	184	.4	11846	23.32	579	312	.6	22892	45.06	624	300	.6	36228	71.32
535	174	.3	12020	23.66	580	254	.5	23146	45.56	625	279	.5	36507	71.87
536	192	.4	12212	24.04	581	263	.5	23409	46.08	626	267	.5	36774	72.39
537	209	.4	12421	24.45	582	266	.5	23675	46.61	627	304	.6	37078	72.99
538	203	.4	12624	24.85	583	292	.6	23967	47.18	628	267	.5	37345	73.52
539	184	.4	12808	25.21	584	316	.6	24283	47.80	629	268	.5	37613	74.04
540	204	.4	13012	25.62	585	303	.6	24586	48.40	630	250	.5	37863	74.54
541	211	.4	13223	26.03	586	309	.6	24895	49.01	631	263	.5	38126	75.05
542	199	.4	13422	26.42	587	287	.6	25182	49.57	632	275	.5	38401	75.60
543	228	.4	13650	26.87	588	294	.6	25476	50.15	633	266	.5	38667	76.12
544	215	.4	13865	27.29	589	286	.6	25762	50.71	634	273	.5	38940	76.66
545	226	.4	14091	27.74	590	316	.6	26078	51.34	635	274	.5	39214	77.20
546	213	.4	14304	28.16	591	323	.6	26401	51.97	636	290	.6	39504	77.77

Appendix 27. Mathematics 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
637	263	.5	39767	78.28	684	115	.2	48320	95.12	731	20	.0	50576	99.56
638	221	.4	39988	78.72	685	100	.2	48420	95.32	732	11	.0	50587	99.58
639	225	.4	40213	79.16	686	100	.2	48520	95.52	733	10	.0	50597	99.60
640	253	.5	40466	79.66	687	109	.2	48629	95.73	734	9	.0	50606	99.62
641	232	.5	40698	80.12	688	70	.1	48699	95.87	735	11	.0	50617	99.64
642	226	.4	40924	80.56	689	78	.2	48777	96.02	736	12	.0	50629	99.67
643	277	.5	41201	81.11	690	76	.1	48853	96.17	737	11	.0	50640	99.69
644	227	.4	41428	81.55	691	94	.2	48947	96.36	738	9	.0	50649	99.71
645	221	.4	41649	81.99	692	86	.2	49033	96.53	739	6	.0	50655	99.72
646	253	.5	41902	82.49	693	95	.2	49128	96.71	740	6	.0	50661	99.73
647	246	.5	42148	82.97	694	87	.2	49215	96.88	741	12	.0	50673	99.75
648	253	.5	42401	83.47	695	75	.1	49290	97.03	742	7	.0	50680	99.77
649	219	.4	42620	83.90	696	66	.1	49356	97.16	743	6	.0	50686	99.78
650	213	.4	42833	84.32	697	78	.2	49434	97.31	744	6	.0	50692	99.79
651	193	.4	43026	84.70	698	66	.1	49500	97.44	745	5	.0	50697	99.80
652	227	.4	43253	85.15	699	49	.1	49549	97.54	746	4	.0	50701	99.81
653	202	.4	43455	85.54	700	59	.1	49608	97.66	747	4	.0	50705	99.82
654	196	.4	43651	85.93	701	60	.1	49668	97.78	748	6	.0	50711	99.83
655	193	.4	43844	86.31	702	52	.1	49720	97.88	749	5	.0	50716	99.84
656	214	.4	44058	86.73	703	38	.1	49758	97.95	750	5	.0	50721	99.85
657	201	.4	44259	87.13	704	48	.1	49806	98.05	751	6	.0	50727	99.86
658	227	.4	44486	87.57	705	45	.1	49851	98.14	752	3	.0	50730	99.87
659	187	.4	44673	87.94	706	44	.1	49895	98.22	753	5	.0	50735	99.88
660	203	.4	44876	88.34	707	45	.1	49940	98.31	754	3	.0	50738	99.88
661	187	.4	45063	88.71	708	45	.1	49985	98.40	755	3	.0	50741	99.89
662	171	.3	45234	89.05	709	32	.1	50017	98.46	756	5	.0	50746	99.90
663	173	.3	45407	89.39	710	35	.1	50052	98.53	757	2	.0	50748	99.90
664	166	.3	45573	89.71	711	46	.1	50098	98.62	758	3	.0	50751	99.91
665	189	.4	45762	90.09	712	29	.1	50127	98.68	759	2	.0	50753	99.91
666	171	.3	45933	90.42	713	32	.1	50159	98.74	760	3	.0	50756	99.92
667	162	.3	46095	90.74	714	34	.1	50193	98.81	761	2	.0	50758	99.92
668	160	.3	46255	91.06	715	39	.1	50232	98.89	762	4	.0	50762	99.93
669	136	.3	46391	91.32	716	29	.1	50261	98.94	763	4	.0	50766	99.94
670	138	.3	46529	91.60	717	26	.1	50287	98.99	764	1	.0	50767	99.94
671	140	.3	46669	91.87	718	30	.1	50317	99.05	765	1	.0	50768	99.94
672	146	.3	46815	92.16	719	21	.0	50338	99.09	766	2	.0	50770	99.94
673	149	.3	46964	92.45	720	31	.1	50369	99.16	769	2	.0	50772	99.95
674	125	.2	47089	92.70	721	30	.1	50399	99.21	773	1	.0	50773	99.95
675	142	.3	47231	92.98	722	16	.0	50415	99.25	774	1	.0	50774	99.95
676	141	.3	47372	93.26	723	17	.0	50432	99.28	776	1	.0	50775	99.95
677	119	.2	47491	93.49	724	20	.0	50452	99.32	777	1	.0	50776	99.96
678	134	.3	47625	93.75	725	21	.0	50473	99.36	778	1	.0	50777	99.96
679	121	.2	47746	93.99	726	14	.0	50487	99.39	779	1	.0	50778	99.96
680	130	.3	47876	94.25	727	22	.0	50509	99.43	780	1	.0	50779	99.96
681	111	.2	47987	94.47	728	23	.0	50532	99.48	783	1	.0	50780	99.96
682	112	.2	48099	94.69	729	11	.0	50543	99.50	784	3	.0	50783	99.97

683	106	.2	48205	94.90	730	13	.0	50556	99.52	785	1	.0	50784	99.97
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Appendix 27. Mathematics 10 Scale Score Distribution (Continued)

SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %	SS	Freq.	%	Cum Freq.	Cum %
786	2	.0	50786	99.98	793	2	.0	50792	99.99	812	1	.0	50796	100.00
790	2	.0	50788	99.98	798	1	.0	50793	99.99	822	1	.0	50797	100.00
791	1	.0	50789	99.98	804	1	.0	50794	99.99	841	1	.0	50798	100.00
792	1	.0	50790	99.98	807	1	.0	50795	99.99					

Figure 27. Mathematics 10 Scale Score Distributions for the Total Population, Female, and Male Students

