Tables for
CMAS Technical Report
2014–2015

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Table 1. CMAS Subject and Grade Combinations

Subject	Grade				
	4	5	7	8	HS
Science		X		X	X
Social Studies	X		X		X

Table 2. Scale Score Ranges

	Limited Command	Moderate Command	Strong Command	Distinguished Command
Grade 4 Social Studies	300–556	557–698	699–792	793–900
Grade 7 Social Studies	300–591	592–700	701–769	770–900
HS Social Studies*	n/a	n/a	n/a	n/a
Grade 5 Science	300–545	546–649	650–770	771–900
Grade 8 Science	300–555	556–651	652–784	785–900
HS Science	300–542	543–672	673–773	774–900

*Values are not available for HS SS because no cut scores have been approved.

Table 3. Coefficient Alpha

Content Area	Grade	Content Standard 1	Content Standard 2	Content Standard 3	Content Standard 4	Full Test
Social Studies	4	0.69	0.65	0.71	0.66	0.89
	7	0.76	0.72	0.71	0.71	0.92
	HS	0.70	0.76	0.59	0.76	0.91
Science	5	0.77	0.84	0.82	0.83	0.93
	8	0.82	0.81	0.83	0.77	0.93
	HS	0.82	0.79	0.81	0.79	0.92

Table 4. Grade 4 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	56,773	620	107.9	300	900	0.88
Disability	6,473	484	122.2	300	900	0.87
No IEP	56,741	621	107.8	300	900	0.88
IEP	6,505	484	122.1	300	900	0.87
No Accommodation	51,806	629	104.6	300	900	0.88
Accommodation	11,440	506	117.9	300	900	0.87
Am. Indian/Alaska Native	468	561	115.9	300	882	0.88
Asian	2,050	646	113.0	300	900	0.89
Black	2,940	549	118.9	300	874	0.87
Hispanic	21,754	557	112.6	300	900	0.87
White	33,317	640	106.4	300	900	0.88
Hawaiian/Pacific Islander	141	596	110.3	300	828	0.87
Two or More Races	2,369	628	112.0	300	900	0.89
Not Free Lunch Eligible	34,690	648	103.5	300	900	0.88
Free Lunch Eligible	23,777	549	112.5	300	900	0.86
Reduced Lunch Eligible	4,779	590	105.4	300	900	0.87
Female	30,891	614	111.6	300	900	0.89
Male	32,355	599	121.5	300	900	0.90
Language Proficiency NA	49,787	622	112.6	300	900	0.89
Language Proficiency NEP	1,171	434	109.0	300	793	0.82
Language Proficiency LEP	7,982	518	98.5	300	863	0.80
Language Proficiency FEP	3,949	634	81.5	300	900	0.82
Not Migrant Or Immigrant	62,558	608	116.4	300	900	0.89
Migrant	173	522	108.7	300	798	0.84
Immigrant	493	511	137.7	300	882	0.91
Migrant and Immigrant	22	420	102.9	300	614	0.78

Table 5. Grade 5 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	56,290	613	101.5	300	900	0.92
Disability	6,567	488	112.2	300	860	0.92
No IEP	56,276	613	101.5	300	900	0.92
IEP	6,581	488	112.1	300	860	0.92
No Accommodation	52,422	619	99.2	300	900	0.92
Accommodation	10,435	504	109.1	300	900	0.92
Am. Indian/Alaska Native	496	552	108.1	300	845	0.93
Asian	2,030	630	111.1	300	900	0.93
Black	2,848	537	109.3	300	867	0.92
Hispanic	21,451	546	103.4	300	900	0.92
White	33,515	637	95.9	300	900	0.91
Hawaiian/Pacific Islander	153	583	114.6	300	886	0.93
Two or More Races	2,169	617	105.3	300	900	0.92
Not Free Lunch Eligible	34,995	641	95.3	300	900	0.91
Free Lunch Eligible	23,146	540	103.2	300	900	0.91
Reduced Lunch Eligible	4,716	583	98.9	300	900	0.91
Female	30,721	599	106.1	300	900	0.93
Male	32,136	600	112.7	300	900	0.93
Language Proficiency NA	49,710	617	103.9	300	900	0.92
Language Proficiency NEP	1,016	428	95.6	300	841	0.87
Language Proficiency LEP	6,778	493	86.5	300	805	0.86
Language Proficiency FEP	5,033	605	80.8	300	900	0.88
Not Migrant or Immigrant	62,190	601	109.0	300	900	0.93
Migrant	163	510	100.6	300	764	0.90
Immigrant	488	510	129.8	300	829	0.94
Migrant and Immigrant	16	405	91.4	300	596	0.87

Table 6. Grade 7 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	53,978	614	101.8	300	900	0.91
Disability	5,745	479	105.8	300	876	0.88
No IEP	53,951	614	101.8	300	900	0.91
IEP	5,772	479	105.7	300	876	0.88
No Accommodation	53,299	613	102.8	300	900	0.91
Accommodation	6,424	497	109.5	300	900	0.89
Am. Indian/Alaska Native	437	557	105.6	300	801	0.90
Asian	2,054	653	108.5	300	900	0.92
Black	2,814	556	112.1	300	879	0.91
Hispanic	20,333	562	103.1	300	900	0.90
White	31,737	626	104.5	300	900	0.91
Hawaiian/Pacific Islander	121	596	103.0	300	790	0.91
Two or More Races	2,019	618	109.2	300	900	0.92
Not Free Lunch Eligible	33,702	634	102.1	300	900	0.91
Free Lunch Eligible	21,397	552	103.5	300	900	0.90
Reduced Lunch Eligible	4,624	586	100.9	300	900	0.90
Female	28,988	614	103.3	300	900	0.91
Male	30,735	588	113.8	300	900	0.92
Language Proficiency NA	47,170	611	108.2	300	900	0.92
Language Proficiency NEP	943	437	95.3	300	750	0.80
Language Proficiency LEP	6,035	519	82.5	300	829	0.82
Language Proficiency FEP	5,143	626	84.7	300	900	0.88
Not Migrant or Immigrant	59,085	602	109.2	300	900	0.92
Migrant	151	533	97.3	300	767	0.87
Immigrant	459	519	118.1	300	870	0.91
Migrant and Immigrant	28	462	105.1	300	686	0.86

Table 7. Grade 8 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	52,635	598	105.8	300	900	0.91
Disability	5,259	460	104.8	300	900	0.88
No IEP	52,619	598	105.7	300	900	0.91
IEP	5,275	460	104.8	300	900	0.88
No Accommodation	52,334	598	105.8	300	900	0.91
Accommodation	5,560	469	111.0	300	876	0.89
Am. Indian/Alaska Native	456	542	109.4	300	832	0.90
Asian	1,874	626	114.5	300	900	0.92
Black	2,766	521	110.5	300	804	0.91
Hispanic	19,656	534	107.1	300	898	0.90
White	30,789	621	100.7	300	900	0.91
Hawaiian/Pacific Islander	140	575	117.4	300	834	0.91
Two or More Races	1,983	606	108.2	300	900	0.92
Not Free Lunch Eligible	33,332	624	101.2	300	900	0.91
Free Lunch Eligible	20,211	526	106.4	300	891	0.90
Reduced Lunch Eligible	4,351	568	101.0	300	863	0.90
Female	28,196	587	108.5	300	900	0.91
Male	29,698	583	116.7	300	900	0.92
Language Proficiency NA	46,011	601	108.1	300	900	0.92
Language Proficiency NEP	856	390	88.0	300	693	0.80
Language Proficiency LEP	5,609	478	86.0	300	835	0.82
Language Proficiency FEP	4,988	597	85.1	300	900	0.88
Not Migrant or Immigrant	57,287	586	112.1	300	900	0.92
Migrant	173	493	107.5	300	726	0.87
Immigrant	405	478	131.7	300	813	0.91
Migrant and Immigrant	29	426	120.7	300	692	0.86

Table 8. HS Social Studies Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	42,560	603	104.5	300	900	0.91
Disability	2,941	493	103.0	300	836	0.86
No IEP	42,524	603	104.5	300	900	0.91
IEP	2,977	493	102.6	300	836	0.86
No Accommodation	43,880	599	106.5	300	900	0.91
Accommodation	1,621	508	108.7	300	814	0.89
Am. Indian/Alaska Native	347	565	105.6	300	775	0.89
Asian	1,459	622	110.7	300	900	0.91
Black	2,242	542	114.4	300	862	0.90
Hispanic	13,483	567	98.2	300	874	0.89
White	24,811	615	106.6	300	900	0.91
Hawaiian/Pacific Islander	130	572	103.2	300	794	0.90
Two or More Races	1,326	603	109.7	300	900	0.91
Not Free Lunch Eligible	30,488	609	107.8	300	900	0.91
Free Lunch Eligible	10,988	560	101.8	300	863	0.89
Reduced Lunch Eligible	2,576	587	100.4	300	854	0.89
Female	22,575	607	100.2	300	900	0.90
Male	22,926	585	113.9	300	900	0.92
Language Proficiency NA	37,564	604	108.0	300	900	0.91
Language Proficiency NEP	452	449	93.6	300	716	0.79
Language Proficiency LEP	2,060	499	81.3	300	754	0.75
Language Proficiency FEP	4,937	591	87.8	300	900	0.87
Not Migrant or Immigrant	45,057	597	107.6	300	900	0.91
Migrant	60	522	108.7	300	693	0.86
Immigrant	369	514	108.6	300	781	0.88
Migrant and Immigrant*	n/a	n/a	n/a	n/a	n/a	n/a

*n-count less than 16

Table 9. HS Science Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No Disability	42,605	602	105.7	300	900	0.92
Disability	2,972	496	98.6	300	832	0.87
No IEP	42,568	602	105.7	300	900	0.92
IEP	3,009	496	98.1	300	832	0.87
No Accommodation	43,846	598	107.4	300	900	0.92
Accommodation	1,731	515	106.1	300	900	0.90
Am. Indian/Alaska Native	350	568	104.1	300	819	0.91
Asian	1,461	622	110.5	300	900	0.93
Black	2,280	540	107.3	300	866	0.90
Hispanic	13,392	556	98.6	300	848	0.89
White	24,920	619	105.8	300	900	0.92
Hawaiian/Pacific Islander	133	568	111.7	300	853	0.91
Two or More Races	1,328	610	109.1	300	900	0.93
Not Free Lunch Eligible	30,635	611	108.5	300	900	0.93
Free Lunch Eligible	10,917	553	99.1	300	860	0.89
Reduced Lunch Eligible	2,566	582	99.1	300	872	0.90
Female	22,558	597	101.8	300	900	0.91
Male	23,019	593	114.6	300	900	0.93
Language Proficiency NA	37,740	605	107.7	300	900	0.92
Language Proficiency NEP	445	454	92.0	300	754	0.80
Language Proficiency LEP	2,031	490	81.1	300	812	0.75
Language Proficiency FEP	4,877	576	90.5	300	881	0.89
Not Migrant or Immigrant	45,134	596	108.2	300	900	0.92
Migrant	59	513	86.6	300	669	0.79
Immigrant	369	518	104.1	300	806	0.89
Migrant and Immigrant*	n/a	n/a	n/a	n/a	n/a	n/a

*n-count less than 16

Table 10. SEMs

Content Area	Grade	SEM
Social Studies	4	38.2
	7	31.7
	HS	32.4
Science	5	29.1
	8	29.6
	HS	30.0

Table 11. Accuracy and Consistency Estimates

Content Area	Grade	Accuracy	Consistency	PChance	Kappa
Social Studies	4	0.77	0.69	0.35	0.53
	7	0.80	0.73	0.36	0.58
	HS*	n/a	n/a	n/a	n/a
Science	5	0.81	0.74	0.31	0.63
	8	0.82	0.75	0.33	0.63
	HS	0.83	0.76	0.34	0.64

*Calculations cannot be made for HS SS because no cut scores have been approved.

Table 12. Accuracy of Cuts

Content Area	Grade	Moderate Command Cut	Strong Command Cut	Distinguished Command Cut
Social Studies	4	0.92	0.89	0.96
	7	0.92	0.92	0.95
	HS*	n/a	n/a	n/a
Science	5	0.94	0.92	0.96
	8	0.93	0.92	0.97
	HS	0.93	0.91	0.97

*Calculations cannot be made for HS SS because no cut scores have been approved.

Table 13. Consistency of Cuts

Content Area	Grade	Moderate Command Cut	Strong Command Cut	Distinguished Command Cut
Social Studies	4	0.89	0.84	0.96
	7	0.88	0.89	0.95
	HS*	n/a	n/a	n/a
Science	5	0.91	0.88	0.95
	8	0.90	0.88	0.97
	HS	0.90	0.87	0.96

*Calculations cannot be made for HS SS because no cut scores have been approved.

Table 14. Grade 4 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	3,166	71.8	26.0	2.1	0.79	0.01	0.79
2	3	3,187	74.1	18.7	7.2	0.83	0.01	0.83
3	3	3,168	77.6	22.0	0.4	0.88	0.01	0.88
4	3	3,193	71.2	27.0	1.8	0.77	0.01	0.77
5	3	3,269	71.9	26.2	1.8	0.80	0.00	0.80
6	3	3,186	70.2	29.0	0.8	0.71	0.00	0.71
7	3	3,189	74.5	23.4	2.1	0.81	0.01	0.81
8	3	3,187	71.3	25.9	2.8	0.68	0.01	0.68
9	3	3,196	72.4	26.3	1.4	0.76	0.00	0.76
10	3	3,196	70.8	26.0	3.2	0.74	0.01	0.74
11	3	3,186	82.0	17.2	0.8	0.89	0.01	0.89
12	3	3,197	74.2	20.9	5.0	0.84	0.01	0.84

Table 15. Grade 5 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	3,172	82.7	16.8	0.5	0.79	0.00	0.79
2	2	3,149	82.7	17.1	0.2	0.68	0.00	0.68
3	2	3,129	91.7	8.2	0.2	0.87	0.01	0.87
4	2	3,151	80.8	17.9	1.3	0.76	0.01	0.76
5	2	3,121	79.9	18.4	1.7	0.79	0.00	0.79
6	2	3,161	84.7	15.2	0.1	0.78	0.00	0.78
7	2	3,156	82.4	15.9	1.7	0.81	0.01	0.81
8	2	3,157	85.3	14.6	0.1	0.79	0.00	0.79
9	2	3,176	79.7	18.8	1.5	0.78	0.02	0.78
10	2	3,164	90.9	8.8	0.3	0.89	0.00	0.89
11	2	3,160	85.2	14.6	0.2	0.86	0.00	0.86
12	2	3,165	83.6	16.1	0.3	0.85	0.00	0.85
13	2	3,192	95.9	4.0	0.0	0.97	0.00	0.97
14	2	3,165	84.7	13.4	1.9	0.87	0.01	0.87
15	3	3,160	70.7	27.5	1.7	0.77	0.03	0.77
16	3	3,160	81.0	17.8	1.2	0.89	0.01	0.89
17	3	3,137	79.8	19.6	0.6	0.90	0.02	0.90

Table 16. Grade 7 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	3,015	78.5	19.6	1.9	0.88	0.02	0.88
2	3	2,995	84.9	14.7	0.4	0.88	0.01	0.88
3	3	3,018	77.5	20.6	1.9	0.82	0.01	0.82
4	3	2,985	72.9	24.9	2.2	0.83	0.01	0.83
5	3	3,017	80.5	18.0	1.5	0.85	0.01	0.85
6	3	3,015	71.5	27.0	1.4	0.80	0.02	0.80
7	3	3,016	72.6	25.4	2.0	0.80	0.01	0.80
8	3	3,009	75.1	23.7	1.1	0.74	0.01	0.74
9	3	3,018	72.3	26.6	1.1	0.81	0.02	0.81
10	3	3,014	73.6	25.2	1.2	0.83	0.01	0.83
11	3	3,022	71.7	23.1	5.2	0.81	0.00	0.81
12	3	3,015	70.7	24.1	5.2	0.74	0.02	0.74

Table 17. Grade 8 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	2,931	85.7	14.0	0.3	0.87	0.00	0.87
2	2	2,895	84.1	15.7	0.2	0.83	0.00	0.83
3	2	2,915	84.8	15.0	0.1	0.84	0.01	0.84
4	2	2,929	85.8	13.5	0.7	0.89	0.01	0.89
5	2	2,930	85.8	13.3	0.9	0.88	0.01	0.88
6	2	2,943	82.0	17.7	0.3	0.76	0.01	0.76
7	2	2,898	83.1	16.4	0.5	0.78	0.02	0.78
8	2	2,924	77.9	21.9	0.2	0.82	0.02	0.82
9	2	2,932	81.6	18.2	0.2	0.82	0.01	0.82
10	2	2,933	86.6	12.6	0.8	0.86	0.03	0.86
11	2	2,923	86.4	13.1	0.5	0.90	0.00	0.90
12	2	2,931	81.3	17.9	0.8	0.76	0.00	0.76
13	2	2,930	82.5	17.4	0.1	0.81	0.02	0.81
14	2	2,920	89.0	11.0	0.1	0.90	0.00	0.90
15	3	2,937	81.2	17.2	1.6	0.91	0.00	0.91
16	3	2,939	89.5	10.1	0.4	0.94	0.01	0.94
17	3	2,925	85.5	11.7	2.8	0.92	0.00	0.92

Table 18. HS Social Studies Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	2,290	74.6	25.2	0.3	0.85	0.02	0.85
2	3	2,295	77.2	22.1	0.7	0.80	0.01	0.80
3	3	2,307	74.9	24.8	0.3	0.78	0.01	0.78
4	3	2,318	72.4	27.4	0.3	0.78	0.01	0.78
5	3	2,313	75.5	23.6	1.0	0.76	0.02	0.77
6	3	2,306	76.5	22.9	0.6	0.77	0.02	0.77
7	3	2,304	71.6	27.3	1.1	0.83	0.01	0.83
8	3	2,291	74.0	25.5	0.5	0.81	0.00	0.81
9	3	2,287	71.4	27.5	1.1	0.79	0.00	0.79
10	3	2,327	73.4	26.3	0.3	0.89	0.01	0.89
11	7	2,305	73.5	25.6	1.0	0.79	0.00	0.79

Table 19. HS Science Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	2,312	82.9	16.5	0.6	0.75	0.00	0.75
2	2	2,343	89.3	10.4	0.3	0.89	0.00	0.89
3	2	2,327	97.0	3.0	0.0	0.95	0.00	0.95
4	2	2,309	89.0	11.0	0.0	0.87	0.01	0.87
5	2	2,304	89.0	11.0	0.0	0.81	0.01	0.81
6	2	2,292	87.2	12.4	0.3	0.88	0.02	0.88
7	2	2,285	96.3	3.6	0.1	0.79	0.01	0.79
8	2	2,303	82.8	16.6	0.6	0.83	0.02	0.83
9	2	2,315	81.5	18.2	0.3	0.84	0.01	0.84
10	2	2,314	85.6	13.9	0.5	0.76	0.01	0.76
11	2	2,289	95.0	4.8	0.2	0.88	0.01	0.88
12	2	2,317	86.1	13.8	0.2	0.74	0.00	0.74
13	2	2,302	92.6	7.3	0.1	0.87	0.01	0.87
14	2	2,303	85.6	14.1	0.3	0.81	0.01	0.81
15	3	2,313	69.6	27.2	3.2	0.78	0.01	0.78
16	3	2,313	77.6	21.4	1.0	0.82	0.01	0.82
17	3	2,313	84.3	13.8	1.9	0.86	0.00	0.86

Table 20. Grade 4 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	1,493	82.2	17.3	0.5	0.86	0.02	0.86
2	3	1,488	80.8	17.7	1.5	0.83	0.01	0.83
3	3	1,489	86.3	13.0	0.7	0.88	0.01	0.88
4	3	1,492	87.0	11.7	1.3	0.90	0.01	0.90
5	3	1,493	63.0	29.9	7.0	0.69	0.01	0.69
6	3	1,495	70.1	27.0	2.9	0.80	0.01	0.80
7	3	1,493	93.1	6.6	0.3	0.84	0.02	0.84
8	3	1,490	96.7	3.2	0.1	0.98	0.00	0.98
9	3	1,493	91.0	8.4	0.7	0.92	0.01	0.92
10	3	1,490	90.9	9.0	0.1	0.90	0.01	0.90
11	3	1,494	87.0	11.9	1.1	0.89	0.01	0.89
12	3	1,490	87.2	12.3	0.5	0.89	0.01	0.89
13	3	1,491	85.7	12.9	1.3	0.91	0.01	0.91
14	3	1,497	85.0	13.0	2.0	0.90	0.01	0.90
15	3	1,493	87.7	11.6	0.7	0.89	0.01	0.89
16	3	1,496	73.4	25.7	0.9	0.84	0.01	0.84
17	3	1,493	82.0	16.3	1.7	0.90	0.01	0.90
18	3	1,494	72.8	23.6	3.5	0.81	0.00	0.81
19	3	1,494	82.0	16.7	1.3	0.86	0.01	0.86
20	3	1,499	74.2	20.4	5.4	0.71	0.00	0.71
21	3	1,497	64.7	32.1	3.2	0.74	0.02	0.74
22	3	1,491	72.8	22.1	5.1	0.79	0.00	0.79
23	3	1,493	74.9	20.4	4.8	0.79	0.03	0.79
24	3	1,493	84.4	12.9	2.7	0.90	0.01	0.90
25	3	1,494	71.7	26.2	2.1	0.79	0.02	0.79
26	3	1,488	89.2	9.2	1.6	0.90	0.01	0.90
27	3	1,489	82.5	16.1	1.4	0.91	0.00	0.91
28	3	1,487	81.4	16.5	2.1	0.87	0.01	0.87
29	3	1,493	82.9	16.1	1.0	0.84	0.01	0.84
30	3	1,487	78.9	18.2	3.0	0.82	0.01	0.82
31	3	1,489	66.4	30.0	3.6	0.69	0.03	0.69

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
32	3	1,488	75.3	21.4	3.2	0.84	0.01	0.84
33	3	1,492	70.6	26.5	2.9	0.82	0.01	0.82
34	3	1,492	66.0	30.0	4.0	0.73	0.00	0.73
35	3	1,494	91.7	8.1	0.2	0.89	0.01	0.89
36	3	1,485	88.6	10.4	0.9	0.94	0.00	0.94
37	3	1,493	66.2	30.0	3.8	0.78	0.01	0.78
38	3	1,486	79.3	19.4	1.3	0.87	0.00	0.87
39	3	1,493	82.5	15.3	2.2	0.88	0.01	0.88
40	3	1,493	71.9	26.1	1.9	0.74	0.01	0.74
41	3	1,493	82.9	15.7	1.5	0.89	0.02	0.89
42	3	1,488	75.1	21.4	3.4	0.85	0.02	0.85

Table 21. Grade 5 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	1,488	79.8	19.7	0.5	0.78	0.02	0.78
2	2	1,492	90.2	8.8	0.9	0.68	0.03	0.68
3	2	1,487	86.7	13.1	0.2	0.89	0.00	0.89
4	2	1,489	90.9	8.9	0.1	0.88	0.02	0.88
5	2	1,487	89.8	9.5	0.6	0.88	0.02	0.88
6	2	1,486	92.3	7.6	0.1	0.91	0.01	0.91
7	2	1,488	83.6	16.2	0.2	0.77	0.01	0.77
8	2	1,488	86.0	13.8	0.1	0.78	0.03	0.78
9	2	1,489	81.7	18.3	0.1	0.77	0.01	0.77
10	2	1,485	90.6	9.4	0.0	0.88	0.02	0.88
11	2	1,483	82.2	17.0	0.8	0.80	0.02	0.80
12	2	1,485	80.7	18.5	0.7	0.77	0.00	0.77
13	2	1,487	80.8	18.6	0.6	0.72	0.02	0.72
14	2	1,489	88.9	10.9	0.2	0.84	0.03	0.85
15	2	1,481	87.1	12.7	0.2	0.77	0.01	0.77
16	2	1,488	85.1	14.9	0.0	0.80	0.01	0.80
17	2	1,483	82.2	17.8	0.0	0.77	0.00	0.77
18	2	1,491	91.4	8.5	0.1	0.91	0.01	0.91
19	2	1,490	88.1	10.9	1.0	0.78	0.02	0.78
20	2	1,490	88.3	8.3	3.5	0.78	0.01	0.78
21	2	1,482	88.2	11.6	0.2	0.87	0.01	0.87
22	2	1,488	87.0	12.8	0.2	0.85	0.01	0.85
23	2	1,488	95.4	4.6	0.0	0.96	0.01	0.96
24	2	1,487	94.4	5.6	0.0	0.96	0.01	0.96
25	2	1,491	94.8	5.2	0.0	0.96	0.01	0.96
26	2	1,491	92.0	7.1	0.9	0.93	0.00	0.93
27	2	1,488	81.5	18.3	0.2	0.66	0.01	0.66
28	2	1,489	80.0	19.1	0.9	0.81	0.04	0.81
29	2	1,486	80.6	18.7	0.7	0.82	0.00	0.82
30	2	1,485	82.5	17.5	0.0	0.83	0.00	0.83
31	2	1,486	93.3	6.7	0.1	0.94	0.00	0.94
32	2	1,480	88.6	11.3	0.1	0.88	0.03	0.88

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	1,493	79.8	19.7	0.5	0.71	0.01	0.71
34	2	1,490	83.1	16.8	0.1	0.87	0.00	0.87
35	2	1,481	88.4	11.4	0.2	0.84	0.01	0.84
36	2	1,487	97.8	2.2	0.0	0.98	0.01	0.98
37	2	1,492	93.6	6.3	0.1	0.94	0.00	0.94
38	2	1,488	79.6	20.4	0.0	0.73	0.01	0.73
39	2	1,487	93.7	6.3	0.0	0.89	0.01	0.89
40	2	1,491	82.4	14.9	2.7	0.83	0.02	0.83
41	2	1,490	97.2	2.5	0.3	0.93	0.01	0.93
42	2	1,488	95.7	4.3	0.0	0.97	0.01	0.97
43	2	1,492	94.0	6.0	0.0	0.92	0.02	0.92
44	2	1,486	91.3	8.0	0.7	0.88	0.01	0.88
45	3	1,496	84.8	13.8	1.5	0.82	0.01	0.82
46	3	1,497	83.6	15.5	0.9	0.89	0.01	0.89
47	3	1,492	72.3	24.1	3.7	0.78	0.01	0.78
48	3	1,494	85.5	13.7	0.8	0.84	0.00	0.84
49	3	1,496	78.5	20.4	1.1	0.87	0.01	0.87
50	3	1,490	78.6	19.4	2.0	0.71	0.02	0.71
51	3	1,498	87.4	10.9	1.7	0.92	0.00	0.92
52	3	1,498	91.1	8.6	0.3	0.95	0.02	0.95
53	3	1,498	92.5	7.5	0.1	0.93	0.01	0.93
54	3	1,498	90.8	8.6	0.6	0.96	0.01	0.96
55	3	1,496	75.1	23.9	1.0	0.81	0.03	0.81
56	3	1,498	78.5	20.2	1.3	0.80	0.00	0.80
57	3	1,497	80.2	19.2	0.6	0.90	0.02	0.90

Table 22. Grade 7 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	1,489	71.3	25.7	3.0	0.74	0.02	0.74
2	3	1,492	69.8	27.9	2.2	0.82	0.02	0.82
3	3	1,486	66.3	28.4	5.3	0.73	0.03	0.74
4	3	1,489	73.5	23.9	2.6	0.77	0.01	0.77
5	3	1,481	79.3	15.9	4.8	0.86	0.00	0.86
6	3	1,492	90.0	6.5	3.5	0.91	0.00	0.91
7	3	1,485	82.2	17.0	0.7	0.86	0.01	0.86
8	3	1,486	71.5	25.4	3.0	0.82	0.01	0.82
9	3	1,494	73.8	22.8	3.4	0.74	0.01	0.74
10	3	1,491	64.3	28.5	7.2	0.78	0.03	0.78
11	3	1,494	77.6	20.5	1.9	0.75	0.01	0.75
12	3	1,488	86.6	12.5	0.9	0.92	0.00	0.92
13	3	1,489	81.3	18.3	0.5	0.86	0.02	0.86
14	3	1,489	91.6	7.5	0.9	0.95	0.00	0.95
15	3	1,495	91.4	8.0	0.6	0.91	0.02	0.91
16	3	1,494	64.7	29.9	5.4	0.74	0.03	0.74
17	3	1,481	62.7	31.1	6.3	0.69	0.02	0.69
18	3	1,483	74.6	13.4	12.0	0.71	0.02	0.71
19	3	1,479	67.3	27.9	4.7	0.81	0.00	0.81
20	3	1,488	67.3	26.3	6.5	0.74	0.01	0.74
21	3	1,487	75.0	24.1	0.9	0.81	0.01	0.81
22	3	1,487	72.4	23.6	4.0	0.86	0.02	0.86
23	3	1,486	78.5	18.4	3.2	0.88	0.02	0.88
24	3	1,486	88.0	10.7	1.3	0.92	0.01	0.92
25	3	1,484	72.6	23.0	4.3	0.81	0.01	0.81
26	3	1,491	82.3	14.6	3.1	0.79	0.00	0.79
27	3	1,493	80.3	16.8	2.9	0.72	0.01	0.72
28	3	1,479	69.8	23.3	6.8	0.74	0.00	0.74
29	3	1,490	72.8	25.4	1.8	0.82	0.02	0.82
30	3	1,497	62.3	33.3	4.4	0.75	0.02	0.75
31	3	1,489	75.2	19.0	5.8	0.82	0.00	0.82
32	3	1,493	70.7	26.6	2.7	0.85	0.03	0.85

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	3	1,490	83.0	14.4	2.6	0.90	0.01	0.90
34	3	1,476	66.5	30.3	3.2	0.79	0.01	0.79
35	3	1,485	71.3	24.8	3.8	0.69	0.00	0.69
36	3	1,484	72.6	25.2	2.2	0.81	0.01	0.81
37	3	1,484	62.3	33.4	4.3	0.76	0.01	0.76
38	3	1,495	79.5	18.7	1.7	0.77	0.00	0.77
39	3	1,488	73.9	23.3	2.8	0.84	0.04	0.84

Table 23. Grade 8 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	1,482	85.3	14.7	0.0	0.88	0.01	0.88
2	2	1,484	83.6	16.4	0.0	0.86	0.01	0.86
3	2	1,483	83.1	16.9	0.0	0.55	0.03	0.55
4	2	1,477	91.4	8.5	0.1	0.94	0.01	0.94
5	2	1,478	89.3	10.7	0.0	0.93	0.01	0.93
6	2	1,473	83.4	16.4	0.2	0.82	0.01	0.82
7	2	1,484	97.2	2.8	0.0	0.98	0.00	0.98
8	2	1,484	81.9	17.5	0.7	0.85	0.00	0.85
9	2	1,489	87.4	12.6	0.0	0.80	0.01	0.80
10	2	1,488	90.2	9.6	0.2	0.88	0.01	0.88
11	2	1,484	87.3	12.5	0.1	0.75	0.03	0.75
12	2	1,479	91.3	8.4	0.3	0.80	0.02	0.80
13	2	1,482	94.3	5.6	0.1	0.73	0.02	0.74
14	2	1,478	95.1	4.5	0.3	0.78	0.00	0.78
15	2	1,480	83.6	14.3	2.1	0.85	0.01	0.85
16	2	1,478	80.4	19.4	0.1	0.85	0.03	0.85
17	2	1,480	85.8	13.1	1.1	0.84	0.01	0.84
18	2	1,472	85.6	14.0	0.4	0.85	0.00	0.85
19	2	1,475	85.7	14.3	0.0	0.88	0.01	0.88
20	2	1,486	84.1	15.9	0.0	0.87	0.03	0.87
21	2	1,481	85.3	14.7	0.0	0.87	0.01	0.87
22	2	1,479	81.5	18.5	0.0	0.86	0.00	0.86
23	2	1,478	93.3	6.6	0.1	0.95	0.00	0.95
24	2	1,484	83.2	16.6	0.2	0.81	0.02	0.81
25	2	1,481	84.8	15.1	0.1	0.83	0.00	0.83
26	2	1,483	86.3	12.9	0.8	0.89	0.02	0.89
27	2	1,483	93.9	6.1	0.0	0.94	0.01	0.94
28	2	1,481	94.3	5.7	0.0	0.94	0.01	0.94
29	2	1,482	88.6	11.1	0.3	0.90	0.01	0.90
30	2	1,484	88.4	11.5	0.1	0.87	0.00	0.88
31	2	1,486	86.0	13.6	0.4	0.88	0.02	0.88
32	2	1,485	92.8	7.2	0.0	0.94	0.01	0.94

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	1,476	93.7	6.2	0.1	0.92	0.00	0.92
34	2	1,482	92.4	7.6	0.1	0.92	0.01	0.92
35	2	1,477	91.9	7.0	1.0	0.91	0.00	0.91
36	2	1,478	91.1	8.3	0.6	0.90	0.00	0.90
37	2	1,486	94.1	5.7	0.2	0.92	0.00	0.92
38	2	1,486	83.6	16.2	0.1	0.80	0.01	0.80
39	2	1,466	80.6	19.2	0.3	0.79	0.00	0.79
40	2	1,475	93.8	6.2	0.1	0.93	0.00	0.93
41	2	1,463	90.6	8.1	1.3	0.90	0.01	0.90
42	2	1,474	93.6	5.7	0.7	0.95	0.00	0.95
43	2	1,474	86.9	12.6	0.5	0.88	0.01	0.88
44	2	1,473	92.7	6.7	0.5	0.94	0.02	0.94
45	2	1,484	95.3	4.6	0.1	0.97	0.01	0.97
46	2	1,488	89.3	10.5	0.2	0.92	0.01	0.92
47	2	1,475	80.4	19.6	0.0	0.84	0.02	0.84
48	2	1,477	92.6	7.2	0.1	0.85	0.00	0.85
49	2	1,479	85.1	10.7	4.2	0.77	0.03	0.77
50	2	1,483	94.0	6.0	0.0	0.91	0.01	0.91
51	2	1,479	83.5	16.1	0.4	0.78	0.02	0.78
52	3	1,496	86.7	12.5	0.8	0.90	0.02	0.90
53	3	1,495	84.7	14.8	0.5	0.93	0.01	0.93
54	3	1,496	92.6	6.9	0.5	0.94	0.00	0.94
55	3	1,493	92.5	6.8	0.7	0.97	0.00	0.97
56	3	1,498	92.8	6.9	0.3	0.97	0.00	0.97
57	3	1,495	83.1	15.4	1.5	0.91	0.00	0.91
58	3	1,498	82.6	16.7	0.7	0.89	0.02	0.89
59	3	1,496	76.8	19.5	3.7	0.88	0.01	0.88
60	3	1,492	89.7	9.6	0.7	0.90	0.02	0.90
61	3	1,496	84.0	15.2	0.8	0.90	0.00	0.90

Table 24. HS Social Studies Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	1,482	88.1	11.5	0.3	0.87	0.02	0.87
2	3	1,491	83.7	15.6	0.7	0.87	0.01	0.87
3	3	1,487	86.2	12.9	0.9	0.86	0.01	0.86
4	3	1,490	89.9	9.7	0.4	0.93	0.00	0.93
5	3	1,486	78.4	20.1	1.5	0.77	0.02	0.77
6	3	1,487	83.9	15.7	0.5	0.78	0.01	0.78
7	3	1,485	73.3	25.4	1.3	0.75	0.02	0.75
8	3	1,484	83.0	16.2	0.7	0.90	0.02	0.90
9	3	1,492	82.5	17.0	0.5	0.87	0.00	0.87
10	3	1,492	74.6	24.3	1.1	0.77	0.02	0.77
11	3	1,492	68.8	27.8	3.4	0.51	0.02	0.51
12	3	1,491	82.6	17.2	0.2	0.79	0.02	0.79
13	3	1,322	68.1	29.0	2.9	0.71	0.01	0.71
14	3	1,478	72.5	26.0	1.5	0.85	0.02	0.85
15	3	1,483	70.3	24.3	5.5	0.78	0.00	0.78
16	3	1,359	73.4	25.5	1.2	0.75	0.03	0.75
17	3	1,380	73.3	24.6	2.0	0.75	0.00	0.75
18	3	1,488	74.4	24.7	0.9	0.76	0.02	0.76
19	3	1,339	76.8	22.6	0.6	0.86	0.00	0.86
20	3	1,479	63.8	34.5	1.8	0.75	0.00	0.75
21	3	1,460	73.6	23.5	2.9	0.86	0.00	0.86
22	3	1,416	73.0	25.4	1.6	0.78	0.01	0.78
23	3	1,482	74.5	23.5	2.0	0.78	0.00	0.78
24	3	1,437	88.1	11.6	0.3	0.94	0.01	0.94
25	3	1,485	85.9	13.9	0.3	0.87	0.00	0.87
26	3	1,343	80.0	18.7	1.3	0.91	0.00	0.91
27	3	1,485	78.4	20.8	0.8	0.89	0.01	0.89
28	3	1,459	74.2	24.6	1.2	0.73	0.01	0.73
29	3	1,478	73.4	18.1	8.5	0.79	0.02	0.79
30	3	1,363	91.2	8.7	0.1	0.91	0.01	0.91
31	3	1,428	65.2	31.7	3.2	0.82	0.01	0.82
32	3	1,460	82.1	17.1	0.8	0.89	0.01	0.89

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	3	1,444	69.8	29.3	0.9	0.79	0.02	0.79
34	3	1,496	81.6	17.6	0.8	0.86	0.02	0.86
35	3	1,298	85.0	14.4	0.6	0.90	0.02	0.90
36	3	1,335	74.2	25.2	0.7	0.79	0.00	0.79
37	3	1,492	70.7	26.1	3.2	0.83	0.00	0.83
38	3	1,297	72.6	26.7	0.8	0.75	0.01	0.75
39	3	1,481	74.7	23.4	1.8	0.88	0.00	0.88
40	3	1,494	74.6	22.8	2.6	0.85	0.02	0.85
41	3	1,355	71.7	27.2	1.2	0.69	0.00	0.69
42	3	1,383	85.3	14.2	0.5	0.93	0.00	0.93
43	3	1,310	76.0	22.7	1.2	0.80	0.00	0.80
44	3	1,436	88.0	10.2	1.8	0.92	0.02	0.92
45	3	1,479	75.8	22.7	1.6	0.84	0.01	0.84
46	3	1,479	82.1	17.1	0.8	0.71	0.02	0.71
47	3	1,299	72.5	26.6	0.8	0.78	0.02	0.78
48	3	1,420	75.4	23.5	1.1	0.81	0.02	0.81
49	3	1,496	71.0	27.6	1.4	0.76	0.02	0.76
50	3	1,423	73.9	20.9	5.1	0.72	0.01	0.72
51	3	1,364	71.0	26.0	2.9	0.73	0.01	0.73
52	3	1,299	74.6	15.6	9.8	0.80	0.01	0.80
53	3	1,484	87.7	11.0	1.3	0.93	0.03	0.93
54	3	1,463	71.1	28.0	0.9	0.80	0.01	0.80
55	3	1,351	67.1	23.2	9.8	0.75	0.03	0.75
56	3	1,498	83.8	14.1	2.1	0.92	0.01	0.92
57	7	1,592	72.4	26.6	1.0	0.83	0.00	0.83
58	7	1,487	70.1	29.3	0.7	0.78	0.01	0.78

Table 25. HS Science Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	1,485	78.5	20.1	1.3	0.70	0.00	0.70
2	2	1,483	82.3	16.8	0.9	0.84	0.00	0.84
3	2	1,477	90.0	9.5	0.5	0.91	0.01	0.91
4	2	1,478	86.1	13.2	0.7	0.81	0.04	0.81
5	2	1,469	88.7	11.3	0.0	0.92	0.01	0.92
6	2	1,481	85.1	14.7	0.3	0.74	0.03	0.74
7	2	1,491	95.1	4.3	0.6	0.78	0.02	0.78
8	2	1,476	88.5	11.1	0.4	0.81	0.02	0.81
9	2	1,481	85.6	13.7	0.7	0.79	0.03	0.79
10	2	1,479	97.3	2.6	0.1	0.75	0.01	0.75
11	2	1,478	86.1	13.7	0.1	0.81	0.02	0.81
12	2	1,483	88.9	11.1	0.0	0.84	0.01	0.84
13	2	1,466	80.8	18.8	0.4	0.73	0.03	0.74
14	2	1,475	82.8	16.9	0.3	0.81	0.00	0.81
15	2	1,488	83.1	16.8	0.1	0.70	0.03	0.70
16	2	1,474	84.9	14.8	0.3	0.73	0.01	0.73
17	2	1,484	82.7	17.0	0.2	0.68	0.00	0.68
18	2	1,477	80.4	19.2	0.3	0.65	0.02	0.65
19	2	1,478	87.8	12.0	0.1	0.74	0.01	0.74
20	2	1,476	83.1	16.8	0.1	0.75	0.03	0.75
21	2	1,481	83.1	15.8	1.1	0.85	0.00	0.85
22	2	1,482	80.2	18.0	1.8	0.80	0.05	0.81
23	2	1,482	97.1	2.8	0.1	0.97	0.00	0.97
24	2	1,479	95.2	4.8	0.0	0.97	0.01	0.97
25	2	1,467	82.7	16.7	0.6	0.84	0.02	0.84
26	2	1,470	85.9	13.5	0.6	0.82	0.02	0.82
27	2	1,473	74.9	24.6	0.5	0.70	0.01	0.70
28	2	1,474	89.1	10.7	0.2	0.69	0.00	0.69
29	2	1,481	87.2	12.7	0.1	0.79	0.01	0.79
30	2	1,478	84.2	15.5	0.3	0.78	0.02	0.78
31	2	1,484	84.6	15.3	0.1	0.73	0.02	0.73
32	2	1,482	80.4	19.6	0.0	0.71	0.03	0.71

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	1,476	88.5	10.2	1.4	0.79	0.02	0.79
34	2	1,481	91.0	9.0	0.0	0.88	0.00	0.88
35	2	1,484	93.4	6.6	0.0	0.91	0.01	0.91
36	2	1,478	89.8	10.1	0.1	0.89	0.02	0.89
37	2	1,478	91.0	9.0	0.0	0.89	0.00	0.89
38	2	1,481	92.6	7.3	0.1	0.90	0.00	0.90
39	2	1,471	85.1	14.7	0.2	0.80	0.01	0.80
40	2	1,482	86.4	13.4	0.3	0.82	0.01	0.82
41	2	1,480	88.1	11.4	0.5	0.89	0.01	0.89
42	2	1,482	91.7	7.2	1.1	0.93	0.02	0.93
43	2	1,468	94.0	5.4	0.5	0.93	0.01	0.93
44	2	1,477	93.6	6.0	0.4	0.93	0.02	0.93
45	2	1,480	84.3	15.3	0.4	0.81	0.02	0.81
46	2	1,473	91.7	7.9	0.4	0.86	0.01	0.86
47	2	1,478	96.6	3.3	0.1	0.97	0.01	0.97
48	2	1,481	80.4	17.7	2.0	0.64	0.03	0.64
49	2	1,471	86.9	12.8	0.2	0.81	0.01	0.81
50	2	1,476	78.7	20.3	0.9	0.73	0.02	0.73
51	2	1,474	88.9	9.8	1.3	0.87	0.01	0.87
52	2	1,482	91.3	7.4	1.3	0.90	0.01	0.90
53	2	1,484	90.9	9.0	0.1	0.80	0.01	0.81
54	3	1,490	91.7	7.4	0.9	0.96	0.01	0.96
55	3	1,497	78.7	17.6	3.7	0.86	0.00	0.86
56	3	1,495	85.6	13.4	1.1	0.79	0.00	0.79
57	3	1,494	98.5	1.4	0.1	0.94	0.00	0.94
58	3	1,493	82.3	16.1	1.6	0.76	0.00	0.76
59	3	1,494	87.8	11.6	0.6	0.88	0.01	0.88
60	3	1,493	85.0	13.2	1.8	0.87	0.00	0.87
61	3	1,489	95.6	4.2	0.2	0.94	0.01	0.94
62	3	1,493	90.3	6.6	3.1	0.91	0.01	0.91
63	3	1,492	86.3	12.7	1.0	0.84	0.02	0.84

Table 26. N-Count by Form

Form	Grade					
	4	5	7	8	HS SS	HS Sci
Online	63,186	62,790	59,671	57,858	45,470	45,548
Paper	42	55	24	25	18	14
Large Print	17	9	20	7	9	11
Braille	1	3	8	4	4	4
Total	63,246	62,857	59,723	57,894	45,501	45,577

Table 27. Demographic Distributions

Subgroup	Grade and Subject					
	4 SS	5 Sci	7 SS	8 Sci	11 SS	11 Sci
No Disability	56,773	56,290	53,978	52,635	42,560	42,605
Disability	6,473	6,567	5,745	5,259	2,941	2,972
No IEP	56,741	56,276	53,951	52,619	42,524	42,568
IEP	6,505	6,581	5,772	5,275	2,977	3,009
No Accommodation	51,806	52,422	53,299	52,334	43,880	43,846
Accommodation	11,440	10,435	6,424	5,560	1,621	1,731
Am. Indian/Alaska Native	468	496	437	456	347	350
Asian	2,050	2,030	2,054	1,874	1,459	1,461
Black	2,940	2,848	2,814	2,766	2,242	2,280
Hispanic	21,754	21,451	20,333	19,656	13,483	13,392
White	33,317	33,515	31,737	30,789	24,811	24,920
Hawaiian/Pacific Islander	141	153	121	140	130	133
Two or More Races	2,369	2,169	2,019	1,983	1,326	1,328
Not Free Lunch Eligible	34,690	34,995	33,702	33,332	30,488	30,635
Free Lunch Eligible	23,777	23,146	21,397	20,211	10,988	10,917
Reduced Lunch Eligible	4,779	4,716	4,624	4,351	2,576	2,566
Female	30,891	30,721	28,988	28,196	22,575	22,558
Male	32,355	32,136	30,735	29,698	22,926	23,019
Language Proficiency NA	49,787	49,710	47,170	46,011	37,564	37,740
Language Proficiency NEP	1,171	1,016	943	856	452	445
Language Proficiency LEP	7,982	6,778	6,035	5,609	2,060	2,031
Language Proficiency FEP	3,949	5,033	5,143	4,988	4,937	4,877
Not Migrant or Immigrant	62,558	62,190	59,085	57,287	45,057	45,134
Migrant	173	163	151	173	60	59
Immigrant	493	488	459	405	369	369
Migrant and Immigrant	22	16	28	29	15	15

Table 28. HS Social Studies Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	Misfit Flag
1	CR	GPC	0.885	-0.074	.	0.000	1.570	0.120	-1.690					Yes
2	CR	GPC	1.068	0.952	.	0.000	1.837	-0.489	-1.347					No
3	CR	GPC	1.526	1.295	.	0.000	0.881	-0.040	-0.841					No
4	CR	GPC	0.976	1.457	.	0.000	1.323	-0.164	-1.159					No
5	CR	GPC	1.378	1.351	.	0.000	1.330	0.171	-1.501					No
6	CR	GPC	1.283	1.027	.	0.000	1.849	-0.438	-1.411					No
7	CR	GPC	1.426	0.381	.	0.000	0.947	0.302	-1.250					No
8	CR	GPC	1.470	1.056	.	0.000	0.969	0.150	-1.119					Yes
9	CR	GPC	1.180	0.823	.	0.000	1.219	0.193	-1.412					No
10	CR	GPC	0.971	0.052	.	0.000	0.292	0.581	-0.873					No
11	CR	GPC	0.889	1.278	.	0.000	0.877	1.389	-0.726	0.958	-1.804	0.505	-1.199	Yes
12	MC	3PL	2.019	1.237	0.342	.	.	.	.					No
13	MC	3PL	0.151	0.760	0.131	.	.	.	.					No
14	MC	3PL	1.986	-0.451	0.259	.	.	.	.					No
15	MC	3PL	0.797	0.771	0.073	.	.	.	.					No
16	MC	3PL	1.639	1.581	0.151	.	.	.	.					No
17	MC	3PL	1.747	0.915	0.165	.	.	.	.					No
18	MC	3PL	1.886	0.512	0.093	.	.	.	.					No
19	MC	3PL	0.888	1.284	0.153									No
20	MC	3PL	1.952	0.823	0.443									No
21	MC	3PL	1.493	0.907	0.146									No
22	MC	3PL	0.841	-0.990	0.017									No
23	MC	3PL	1.528	-0.230	0.328									No
24	MC	3PL	2.431	-0.208	0.183									No
25	MC	3PL	1.126	0.452	0.292									No
26	MC	3PL	0.581	1.795	0.274									No
27	MC	3PL	1.806	0.127	0.094									No
28	MC	3PL	1.647	0.316	0.141									No
29	MC	3PL	0.913	0.487	0.068									No
30	MC	3PL	1.407	0.257	0.294									No
31	MC	3PL	1.977	-0.381	0.331									No
32	MC	3PL	0.584	2.461	0.147									No
33	MC	3PL	1.337	-0.326	0.243									No
34	MC	3PL	0.890	2.832	0.279									No
35	MC	3PL	2.242	0.102	0.149									No
36	MC	3PL	3.027	0.213	0.147									No
37	MC	3PL	1.612	0.571	0.309									No
38	MC	3PL	0.925	-0.280	0.060									No
39	MC	3PL	1.508	-0.167	0.108									No
40	MC	3PL	1.443	0.173	0.232									No
41	MC	3PL	0.790	0.631	0.126									No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	D5	D6	D7	D8	Misfit Flag
42	XI	3PL	0.904	5.013	0.030									No
43	XI	2PL	1.256	-0.473	.									No
44	XI	2PL	1.031	-0.239	.									No
45	XI	3PL	0.819	1.645	0.238									No
46	XI	3PL	1.102	-1.244	0.049									No
47	XI	3PL	1.464	-1.131	0.010									No
48	XI	3PL	1.249	1.328	0.276									No
49	XI	3PL	1.372	0.936	0.336									No
50	XI	3PL	0.138	1.161	0.110									No
51	XI	3PL	1.794	0.402	0.327									No

Table 29. HS Science Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.656	1.162	.	0.000	0.754	-0.754	.	No
2	CR	GPC	1.097	1.091	.	0.000	0.141	-0.141	.	No
3	CR	GPC	1.470	1.502	.	0.000	-0.522	0.522	.	No
4	CR	GPC	1.008	1.306	.	0.000	0.639	-0.639	.	No
5	CR	GPC	1.092	2.094	.	0.000	1.622	-1.622	.	No
6	CR	GPC	1.181	0.627	.	0.000	0.556	-0.556	.	No
7	CR	GPC	1.481	2.393	.	0.000	-0.221	0.221	.	No
8	CR	GPC	1.364	0.957	.	0.000	0.171	-0.171	.	No
9	CR	GPC	1.331	0.601	.	0.000	0.367	-0.367	.	No
10	CR	GPC	1.200	1.714	.	0.000	0.064	-0.064	.	No
11	CR	GPC	1.156	2.041	.	0.000	0.306	-0.306	.	No
12	CR	GPC	1.520	1.743	.	0.000	1.230	-1.230	.	No
13	CR	GPC	1.248	1.324	.	0.000	1.665	-1.665	.	No
14	CR	GPC	1.023	1.376	.	0.000	0.617	-0.617	.	No
15	CR	GPC	1.014	1.066	.	0.000	0.526	0.261	-0.787	No
16	CR	GPC	1.287	1.203	.	0.000	1.029	-0.072	-0.957	No
17	CR	GPC	1.024	1.230	.	0.000	0.577	-0.400	-0.178	No
18	MC	3PL	1.801	0.885	0.287	.	.	.	.	No
19	MC	3PL	1.070	1.976	0.345	.	.	.	.	No
20	MC	3PL	1.394	-0.858	0.215	.	.	.	.	No
21	MC	3PL	1.650	-0.443	0.248	.	.	.	.	No
22	MC	3PL	3.057	1.549	0.367	.	.	.	.	No
23	MC	3PL	1.172	0.604	0.059	.	.	.	.	No
24	MC	3PL	1.201	1.971	0.258	.	.	.	.	No
25	MC	3PL	2.318	0.302	0.204	.	.	.	.	No
26	MC	3PL	0.909	0.272	0.000	.	.	.	.	No
27	MC	3PL	1.793	-0.086	0.022	.	.	.	.	No
28	MC	3PL	1.873	0.349	0.080	.	.	.	.	No
29	MC	3PL	0.664	-0.684	0.042	.	.	.	.	No
30	MC	3PL	1.780	1.452	0.199	.	.	.	.	No
31	MC	3PL	2.063	0.741	0.064	.	.	.	.	No
32	MC	3PL	1.712	-0.285	0.208	.	.	.	.	No
33	MC	3PL	1.677	0.646	0.268	.	.	.	.	No
34	MC	3PL	1.957	-0.651	0.017	.	.	.	.	No
35	MC	3PL	0.766	2.089	0.029	.	.	.	.	No
36	MC	3PL	1.019	0.100	0.144	.	.	.	.	No
37	MC	3PL	1.686	2.129	0.203	.	.	.	.	No
38	MC	3PL	1.984	1.618	0.208	.	.	.	.	No
39	MC	3PL	0.364	1.095	0.097	.	.	.	.	No
40	MC	3PL	1.567	1.201	0.205	.	.	.	.	No
41	MC	3PL	1.434	-0.092	0.015	.	.	.	.	No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	MC	3PL	1.616	0.637	0.256	.	.	.	.	No
43	MC	3PL	1.295	-0.014	0.011	.	.	.	.	No
44	MC	3PL	1.358	0.093	0.009	.	.	.	.	No
45	MC	3PL	0.874	0.507	0.514	.	.	.	.	No
46	MC	3PL	1.348	0.915	0.345	.	.	.	.	No
47	MC	3PL	1.359	-0.420	0.246	.	.	.	.	No
48	XI	3PL	2.703	2.138	0.053	.	.	.	.	No
49	XI	2PL	0.981	1.586	.	.	.	.	.	No
50	XI	3PL	1.188	0.204	0.136	.	.	.	.	No
51	XI	2PL	1.682	-1.006	.	.	.	.	.	No
52	XI	2PL	1.043	0.641	.	.	.	.	.	No
53	XI	2PL	1.587	0.850	.	.	.	.	.	No
54	XI	3PL	1.661	1.626	0.144	.	.	.	.	No
55	XI	2PL	1.340	1.004	.	.	.	.	.	No
56	XI	2PL	0.848	1.009	.	.	.	.	.	No
57	XI	2PL	0.264	7.261	.	.	.	.	.	No
58	XI	2PL	1.025	2.728	.	.	.	.	.	No
59	XI	2PL	1.043	1.852	.	.	.	.	.	No
60	XI	2PL	0.828	3.381	.	.	.	.	.	No

Table 30. HS Social Studies Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,176	2.58	1,176	2.58	345	14	0.03	1,620	3.56	390	24	0.05	2,392	5.26
301	8	0.02	1,184	2.60	346	18	0.04	1,638	3.60	391	20	0.04	2,412	5.30
302	7	0.02	1,191	2.62	347	14	0.03	1,652	3.63	392	27	0.06	2,439	5.36
303	10	0.02	1,201	2.64	348	7	0.02	1,659	3.65	393	18	0.04	2,457	5.40
304	8	0.02	1,209	2.66	349	13	0.03	1,672	3.67	394	24	0.05	2,481	5.45
305	7	0.02	1,216	2.67	350	12	0.03	1,684	3.70	395	20	0.04	2,501	5.50
306	4	0.01	1,220	2.68	351	11	0.02	1,695	3.73	396	19	0.04	2,520	5.54
307	10	0.02	1,230	2.70	352	6	0.01	1,701	3.74	397	30	0.07	2,550	5.60
308	8	0.02	1,238	2.72	353	11	0.02	1,712	3.76	398	22	0.05	2,572	5.65
309	11	0.02	1,249	2.74	354	10	0.02	1,722	3.78	399	26	0.06	2,598	5.71
310	6	0.01	1,255	2.76	355	12	0.03	1,734	3.81	400	23	0.05	2,621	5.76
311	9	0.02	1,264	2.78	356	17	0.04	1,751	3.85	401	21	0.05	2,642	5.81
312	3	0.01	1,267	2.78	357	17	0.04	1,768	3.89	402	28	0.06	2,670	5.87
313	8	0.02	1,275	2.80	358	10	0.02	1,778	3.91	403	29	0.06	2,699	5.93
314	7	0.02	1,282	2.82	359	18	0.04	1,796	3.95	404	22	0.05	2,721	5.98
315	6	0.01	1,288	2.83	360	17	0.04	1,813	3.98	405	25	0.05	2,746	6.04
316	9	0.02	1,297	2.85	361	14	0.03	1,827	4.02	406	24	0.05	2,770	6.09
317	10	0.02	1,307	2.87	362	12	0.03	1,839	4.04	407	28	0.06	2,798	6.15
318	6	0.01	1,313	2.89	363	15	0.03	1,854	4.07	408	33	0.07	2,831	6.22
319	14	0.03	1,327	2.92	364	10	0.02	1,864	4.10	409	27	0.06	2,858	6.28
320	9	0.02	1,336	2.94	365	16	0.04	1,880	4.13	410	37	0.08	2,895	6.36
321	6	0.01	1,342	2.95	366	20	0.04	1,900	4.18	411	33	0.07	2,928	6.44
322	7	0.02	1,349	2.96	367	23	0.05	1,923	4.23	412	30	0.07	2,958	6.50
323	14	0.03	1,363	3.00	368	12	0.03	1,935	4.25	413	28	0.06	2,986	6.56
324	9	0.02	1,372	3.02	369	16	0.04	1,951	4.29	414	30	0.07	3,016	6.63
325	11	0.02	1,383	3.04	370	16	0.04	1,967	4.32	415	29	0.06	3,045	6.69
326	12	0.03	1,395	3.07	371	23	0.05	1,990	4.37	416	31	0.07	3,076	6.76
327	12	0.03	1,407	3.09	372	14	0.03	2,004	4.40	417	28	0.06	3,104	6.82
328	10	0.02	1,417	3.11	373	30	0.07	2,034	4.47	418	35	0.08	3,139	6.90
329	8	0.02	1,425	3.13	374	19	0.04	2,053	4.51	419	31	0.07	3,170	6.97
330	5	0.01	1,430	3.14	375	19	0.04	2,072	4.55	420	32	0.07	3,202	7.04
331	13	0.03	1,443	3.17	376	20	0.04	2,092	4.60	421	35	0.08	3,237	7.11
332	12	0.03	1,455	3.20	377	20	0.04	2,112	4.64	422	38	0.08	3,275	7.20
333	13	0.03	1,468	3.23	378	21	0.05	2,133	4.69	423	33	0.07	3,308	7.27
334	11	0.02	1,479	3.25	379	17	0.04	2,150	4.73	424	36	0.08	3,344	7.35
335	8	0.02	1,487	3.27	380	27	0.06	2,177	4.78	425	38	0.08	3,382	7.43
336	13	0.03	1,500	3.30	381	21	0.05	2,198	4.83	426	29	0.06	3,411	7.50
337	14	0.03	1,514	3.33	382	28	0.06	2,226	4.89	427	27	0.06	3,438	7.56
338	16	0.04	1,530	3.36	383	18	0.04	2,244	4.93	428	26	0.06	3,464	7.61
339	6	0.01	1,536	3.38	384	18	0.04	2,262	4.97	429	31	0.07	3,495	7.68
340	18	0.04	1,554	3.42	385	15	0.03	2,277	5.00	430	40	0.09	3,535	7.77
341	15	0.03	1,569	3.45	386	20	0.04	2,297	5.05	431	31	0.07	3,566	7.84
342	14	0.03	1,583	3.48	387	26	0.06	2,323	5.11	432	41	0.09	3,607	7.93
343	13	0.03	1,596	3.51	388	20	0.04	2,343	5.15	433	35	0.08	3,642	8.00
344	10	0.02	1,606	3.53	389	25	0.05	2,368	5.20	434	37	0.08	3,679	8.09

Table 30. HS Social Studies Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	34	0.07	3,713	8.16	480	76	0.17	6,089	13.38	525	111	0.24	10,076	22.14
436	33	0.07	3,746	8.23	481	75	0.16	6,164	13.55	526	121	0.27	10,197	22.41
437	46	0.10	3,792	8.33	482	72	0.16	6,236	13.71	527	120	0.26	10,317	22.67
438	38	0.08	3,830	8.42	483	68	0.15	6,304	13.85	528	114	0.25	10,431	22.92
439	44	0.10	3,874	8.51	484	72	0.16	6,376	14.01	529	119	0.26	10,550	23.19
440	38	0.08	3,912	8.60	485	58	0.13	6,434	14.14	530	115	0.25	10,665	23.44
441	38	0.08	3,950	8.68	486	72	0.16	6,506	14.30	531	114	0.25	10,779	23.69
442	48	0.11	3,998	8.79	487	60	0.13	6,566	14.43	532	121	0.27	10,900	23.96
443	40	0.09	4,038	8.87	488	58	0.13	6,624	14.56	533	106	0.23	11,006	24.19
444	44	0.10	4,082	8.97	489	75	0.16	6,699	14.72	534	115	0.25	11,121	24.44
445	46	0.10	4,128	9.07	490	84	0.18	6,783	14.91	535	117	0.26	11,238	24.70
446	39	0.09	4,167	9.16	491	84	0.18	6,867	15.09	536	118	0.26	11,356	24.96
447	46	0.10	4,213	9.26	492	72	0.16	6,939	15.25	537	109	0.24	11,465	25.20
448	39	0.09	4,252	9.34	493	73	0.16	7,012	15.41	538	110	0.24	11,575	25.44
449	43	0.09	4,295	9.44	494	90	0.20	7,102	15.61	539	141	0.31	11,716	25.75
450	41	0.09	4,336	9.53	495	69	0.15	7,171	15.76	540	150	0.33	11,866	26.08
451	51	0.11	4,387	9.64	496	79	0.17	7,250	15.93	541	132	0.29	11,998	26.37
452	40	0.09	4,427	9.73	497	101	0.22	7,351	16.16	542	136	0.30	12,134	26.67
453	55	0.12	4,482	9.85	498	95	0.21	7,446	16.36	543	145	0.32	12,279	26.99
454	63	0.14	4,545	9.99	499	85	0.19	7,531	16.55	544	134	0.29	12,413	27.28
455	55	0.12	4,600	10.11	500	72	0.16	7,603	16.71	545	114	0.25	12,527	27.53
456	49	0.11	4,649	10.22	501	76	0.17	7,679	16.88	546	147	0.32	12,674	27.85
457	50	0.11	4,699	10.33	502	97	0.21	7,776	17.09	547	146	0.32	12,820	28.18
458	58	0.13	4,757	10.45	503	88	0.19	7,864	17.28	548	131	0.29	12,951	28.46
459	51	0.11	4,808	10.57	504	92	0.20	7,956	17.49	549	161	0.35	13,112	28.82
460	60	0.13	4,868	10.70	505	99	0.22	8,055	17.70	550	157	0.35	13,269	29.16
461	44	0.10	4,912	10.80	506	90	0.20	8,145	17.90	551	131	0.29	13,400	29.45
462	50	0.11	4,962	10.91	507	91	0.20	8,236	18.10	552	154	0.34	13,554	29.79
463	42	0.09	5,004	11.00	508	98	0.22	8,334	18.32	553	163	0.36	13,717	30.15
464	58	0.13	5,062	11.13	509	95	0.21	8,429	18.52	554	140	0.31	13,857	30.45
465	51	0.11	5,113	11.24	510	74	0.16	8,503	18.69	555	136	0.30	13,993	30.75
466	50	0.11	5,163	11.35	511	97	0.21	8,600	18.90	556	159	0.35	14,152	31.10
467	64	0.14	5,227	11.49	512	82	0.18	8,682	19.08	557	153	0.34	14,305	31.44
468	58	0.13	5,285	11.62	513	111	0.24	8,793	19.32	558	150	0.33	14,455	31.77
469	58	0.13	5,343	11.74	514	93	0.20	8,886	19.53	559	152	0.33	14,607	32.10
470	79	0.17	5,422	11.92	515	100	0.22	8,986	19.75	560	155	0.34	14,762	32.44
471	73	0.16	5,495	12.08	516	100	0.22	9,086	19.97	561	150	0.33	14,912	32.77
472	52	0.11	5,547	12.19	517	108	0.24	9,194	20.21	562	164	0.36	15,076	33.13
473	59	0.13	5,606	12.32	518	108	0.24	9,302	20.44	563	138	0.30	15,214	33.44
474	83	0.18	5,689	12.50	519	103	0.23	9,405	20.67	564	179	0.39	15,393	33.83
475	69	0.15	5,758	12.65	520	103	0.23	9,508	20.90	565	144	0.32	15,537	34.15
476	58	0.13	5,816	12.78	521	118	0.26	9,626	21.16	566	149	0.33	15,686	34.47
477	58	0.13	5,874	12.91	522	111	0.24	9,737	21.40	567	171	0.38	15,857	34.85
478	69	0.15	5,943	13.06	523	106	0.23	9,843	21.63	568	153	0.34	16,010	35.19
479	70	0.15	6,013	13.22	524	122	0.27	9,965	21.90	569	153	0.34	16,163	35.52

Table 30. HS Social Studies Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	167	0.37	16,330	35.89	615	191	0.42	24,303	53.41	660	194	0.43	32,455	71.33
571	189	0.42	16,519	36.30	616	194	0.43	24,497	53.84	661	180	0.40	32,635	71.72
572	158	0.35	16,677	36.65	617	210	0.46	24,707	54.30	662	158	0.35	32,793	72.07
573	168	0.37	16,845	37.02	618	166	0.36	24,873	54.66	663	170	0.37	32,963	72.44
574	162	0.36	17,007	37.38	619	156	0.34	25,029	55.01	664	188	0.41	33,151	72.86
575	172	0.38	17,179	37.76	620	176	0.39	25,205	55.39	665	154	0.34	33,305	73.20
576	174	0.38	17,353	38.14	621	202	0.44	25,407	55.84	666	165	0.36	33,470	73.56
577	159	0.35	17,512	38.49	622	184	0.40	25,591	56.24	667	169	0.37	33,639	73.93
578	162	0.36	17,674	38.84	623	191	0.42	25,782	56.66	668	153	0.34	33,792	74.27
579	173	0.38	17,847	39.22	624	175	0.38	25,957	57.05	669	177	0.39	33,969	74.66
580	177	0.39	18,024	39.61	625	163	0.36	26,120	57.41	670	172	0.38	34,141	75.03
581	164	0.36	18,188	39.97	626	201	0.44	26,321	57.85	671	167	0.37	34,308	75.40
582	174	0.38	18,362	40.36	627	179	0.39	26,500	58.24	672	152	0.33	34,460	75.73
583	163	0.36	18,525	40.71	628	177	0.39	26,677	58.63	673	173	0.38	34,633	76.11
584	181	0.40	18,706	41.11	629	184	0.40	26,861	59.03	674	145	0.32	34,778	76.43
585	171	0.38	18,877	41.49	630	173	0.38	27,034	59.41	675	149	0.33	34,927	76.76
586	174	0.38	19,051	41.87	631	182	0.40	27,216	59.81	676	163	0.36	35,090	77.12
587	164	0.36	19,215	42.23	632	181	0.40	27,397	60.21	677	150	0.33	35,240	77.45
588	168	0.37	19,383	42.60	633	200	0.44	27,597	60.65	678	182	0.40	35,422	77.85
589	173	0.38	19,556	42.98	634	189	0.42	27,786	61.07	679	121	0.27	35,543	78.11
590	198	0.44	19,754	43.41	635	180	0.40	27,966	61.46	680	164	0.36	35,707	78.48
591	179	0.39	19,933	43.81	636	195	0.43	28,161	61.89	681	166	0.36	35,873	78.84
592	153	0.34	20,086	44.14	637	194	0.43	28,355	62.32	682	176	0.39	36,049	79.23
593	177	0.39	20,263	44.53	638	176	0.39	28,531	62.70	683	154	0.34	36,203	79.57
594	169	0.37	20,432	44.90	639	183	0.40	28,714	63.11	684	133	0.29	36,336	79.86
595	177	0.39	20,609	45.29	640	160	0.35	28,874	63.46	685	161	0.35	36,497	80.21
596	185	0.41	20,794	45.70	641	175	0.38	29,049	63.84	686	156	0.34	36,653	80.55
597	185	0.41	20,979	46.11	642	176	0.39	29,225	64.23	687	158	0.35	36,811	80.90
598	165	0.36	21,144	46.47	643	198	0.44	29,423	64.66	688	133	0.29	36,944	81.19
599	179	0.39	21,323	46.86	644	165	0.36	29,588	65.03	689	149	0.33	37,093	81.52
600	182	0.40	21,505	47.26	645	159	0.35	29,747	65.38	690	139	0.31	37,232	81.83
601	181	0.40	21,686	47.66	646	176	0.39	29,923	65.76	691	113	0.25	37,345	82.08
602	190	0.42	21,876	48.08	647	186	0.41	30,109	66.17	692	124	0.27	37,469	82.35
603	181	0.40	22,057	48.48	648	185	0.41	30,294	66.58	693	139	0.31	37,608	82.65
604	186	0.41	22,243	48.88	649	189	0.42	30,483	66.99	694	140	0.31	37,748	82.96
605	147	0.32	22,390	49.21	650	192	0.42	30,675	67.42	695	137	0.30	37,885	83.26
606	188	0.41	22,578	49.62	651	160	0.35	30,835	67.77	696	136	0.30	38,021	83.56
607	230	0.51	22,808	50.13	652	184	0.40	31,019	68.17	697	123	0.27	38,144	83.83
608	195	0.43	23,003	50.55	653	170	0.37	31,189	68.55	698	143	0.31	38,287	84.15
609	169	0.37	23,172	50.93	654	195	0.43	31,384	68.97	699	138	0.30	38,425	84.45
610	207	0.45	23,379	51.38	655	166	0.36	31,550	69.34	700	149	0.33	38,574	84.78
611	200	0.44	23,579	51.82	656	164	0.36	31,714	69.70	701	130	0.29	38,704	85.06
612	178	0.39	23,757	52.21	657	175	0.38	31,889	70.08	702	145	0.32	38,849	85.38
613	165	0.36	23,922	52.57	658	177	0.39	32,066	70.47	703	116	0.25	38,965	85.64
614	190	0.42	24,112	52.99	659	195	0.43	32,261	70.90	704	122	0.27	39,087	85.90

Table 30. HS Social Studies Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	108	0.24	39,195	86.14	750	46	0.10	43,226	95.00	795	20	0.04	44,870	98.61
706	123	0.27	39,318	86.41	751	54	0.12	43,280	95.12	796	21	0.05	44,891	98.66
707	120	0.26	39,438	86.68	752	53	0.12	43,333	95.24	797	14	0.03	44,905	98.69
708	121	0.27	39,559	86.94	753	48	0.11	43,381	95.34	798	20	0.04	44,925	98.73
709	122	0.27	39,681	87.21	754	57	0.13	43,438	95.47	799	16	0.04	44,941	98.77
710	113	0.25	39,794	87.46	755	58	0.13	43,496	95.59	800	12	0.03	44,953	98.80
711	109	0.24	39,903	87.70	756	43	0.09	43,539	95.69	801	22	0.05	44,975	98.84
712	106	0.23	40,009	87.93	757	63	0.14	43,602	95.83	802	18	0.04	44,993	98.88
713	116	0.25	40,125	88.18	758	50	0.11	43,652	95.94	803	13	0.03	45,006	98.91
714	100	0.22	40,225	88.40	759	51	0.11	43,703	96.05	804	22	0.05	45,028	98.96
715	115	0.25	40,340	88.66	760	43	0.09	43,746	96.14	805	12	0.03	45,040	98.99
716	113	0.25	40,453	88.91	761	54	0.12	43,800	96.26	806	13	0.03	45,053	99.02
717	98	0.22	40,551	89.12	762	43	0.09	43,843	96.36	807	12	0.03	45,065	99.04
718	101	0.22	40,652	89.34	763	40	0.09	43,883	96.44	808	16	0.04	45,081	99.08
719	87	0.19	40,739	89.53	764	53	0.12	43,936	96.56	809	14	0.03	45,095	99.11
720	103	0.23	40,842	89.76	765	40	0.09	43,976	96.65	810	12	0.03	45,107	99.13
721	101	0.22	40,943	89.98	766	52	0.11	44,028	96.76	811	11	0.02	45,118	99.16
722	83	0.18	41,026	90.17	767	40	0.09	44,068	96.85	812	15	0.03	45,133	99.19
723	82	0.18	41,108	90.35	768	46	0.10	44,114	96.95	813	7	0.02	45,140	99.21
724	105	0.23	41,213	90.58	769	39	0.09	44,153	97.04	814	21	0.05	45,161	99.25
725	95	0.21	41,308	90.78	770	41	0.09	44,194	97.13	815	10	0.02	45,171	99.27
726	106	0.23	41,414	91.02	771	45	0.10	44,239	97.23	816	15	0.03	45,186	99.31
727	94	0.21	41,508	91.22	772	35	0.08	44,274	97.30	817	18	0.04	45,204	99.35
728	66	0.15	41,574	91.37	773	43	0.09	44,317	97.40	818	10	0.02	45,214	99.37
729	78	0.17	41,652	91.54	774	31	0.07	44,348	97.47	819	9	0.02	45,223	99.39
730	87	0.19	41,739	91.73	775	31	0.07	44,379	97.53	820	8	0.02	45,231	99.41
731	95	0.21	41,834	91.94	776	37	0.08	44,416	97.62	821	11	0.02	45,242	99.43
732	83	0.18	41,917	92.12	777	21	0.05	44,437	97.66	822	9	0.02	45,251	99.45
733	68	0.15	41,985	92.27	778	34	0.07	44,471	97.74	823	8	0.02	45,259	99.47
734	77	0.17	42,062	92.44	779	25	0.05	44,496	97.79	824	9	0.02	45,268	99.49
735	99	0.22	42,161	92.66	780	27	0.06	44,523	97.85	825	11	0.02	45,279	99.51
736	78	0.17	42,239	92.83	781	29	0.06	44,552	97.91	826	6	0.01	45,285	99.53
737	96	0.21	42,335	93.04	782	34	0.07	44,586	97.99	827	7	0.02	45,292	99.54
738	85	0.19	42,420	93.23	783	20	0.04	44,606	98.03	828	4	0.01	45,296	99.55
739	80	0.18	42,500	93.40	784	21	0.05	44,627	98.08	829	10	0.02	45,306	99.57
740	76	0.17	42,576	93.57	785	29	0.06	44,656	98.14	830	5	0.01	45,311	99.58
741	72	0.16	42,648	93.73	786	24	0.05	44,680	98.20	831	3	0.01	45,314	99.59
742	78	0.17	42,726	93.90	787	24	0.05	44,704	98.25	832	7	0.02	45,321	99.60
743	54	0.12	42,780	94.02	788	26	0.06	44,730	98.31	833	4	0.01	45,325	99.61
744	74	0.16	42,854	94.18	789	27	0.06	44,757	98.36	834	11	0.02	45,336	99.64
745	75	0.16	42,929	94.35	790	25	0.05	44,782	98.42	835	4	0.01	45,340	99.65
746	76	0.17	43,005	94.51	791	15	0.03	44,797	98.45	836	6	0.01	45,346	99.66
747	54	0.12	43,059	94.63	792	16	0.04	44,813	98.49	837	5	0.01	45,351	99.67
748	62	0.14	43,121	94.77	793	18	0.04	44,831	98.53	838	6	0.01	45,357	99.68
749	59	0.13	43,180	94.90	794	19	0.04	44,850	98.57	839	6	0.01	45,363	99.70

Table 30. HS Social Studies Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	3	0.01	45,366	99.70	895	2	0.00	45,485	99.96
841	3	0.01	45,369	99.71	896	1	0.00	45,486	99.97
842	7	0.02	45,376	99.73	897	1	0.00	45,487	99.97
843	5	0.01	45,381	99.74	898	1	0.00	45,488	99.97
844	7	0.02	45,388	99.75	900	13	0.03	45,501	100.00
845	4	0.01	45,392	99.76					
846	1	0.00	45,393	99.76					
847	6	0.01	45,399	99.78					
848	1	0.00	45,400	99.78					
849	2	0.00	45,402	99.78					
850	2	0.00	45,404	99.79					
851	3	0.01	45,407	99.79					
852	2	0.00	45,409	99.80					
853	3	0.01	45,412	99.80					
854	3	0.01	45,415	99.81					
855	4	0.01	45,419	99.82					
856	3	0.01	45,422	99.83					
857	2	0.00	45,424	99.83					
858	4	0.01	45,428	99.84					
859	1	0.00	45,429	99.84					
860	3	0.01	45,432	99.85					
861	2	0.00	45,434	99.85					
862	2	0.00	45,436	99.86					
863	3	0.01	45,439	99.86					
864	2	0.00	45,441	99.87					
865	5	0.01	45,446	99.88					
866	1	0.00	45,447	99.88					
867	2	0.00	45,449	99.89					
868	1	0.00	45,450	99.89					
869	1	0.00	45,451	99.89					
870	3	0.01	45,454	99.90					
871	2	0.00	45,456	99.90					
872	1	0.00	45,457	99.90					
873	1	0.00	45,458	99.91					
874	3	0.01	45,461	99.91					
875	1	0.00	45,462	99.91					
877	5	0.01	45,467	99.93					
878	4	0.01	45,471	99.93					
879	1	0.00	45,472	99.94					
881	2	0.00	45,474	99.94					
883	1	0.00	45,475	99.94					
888	4	0.01	45,479	99.95					
889	2	0.00	45,481	99.96					
892	1	0.00	45,482	99.96					
893	1	0.00	45,483	99.96					

Table 31. HS Science Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	863	1.89	863	1.89	345	18	0.04	1,333	2.92	390	21	0.05	2,095	4.60
301	6	0.01	869	1.91	346	13	0.03	1,346	2.95	391	33	0.07	2,128	4.67
302	4	0.01	873	1.92	347	18	0.04	1,364	2.99	392	24	0.05	2,152	4.72
303	5	0.01	878	1.93	348	12	0.03	1,376	3.02	393	25	0.05	2,177	4.78
304	7	0.02	885	1.94	349	14	0.03	1,390	3.05	394	33	0.07	2,210	4.85
305	8	0.02	893	1.96	350	9	0.02	1,399	3.07	395	34	0.07	2,244	4.92
306	7	0.02	900	1.97	351	14	0.03	1,413	3.10	396	15	0.03	2,259	4.96
307	9	0.02	909	1.99	352	15	0.03	1,428	3.13	397	27	0.06	2,286	5.02
308	3	0.01	912	2.00	353	17	0.04	1,445	3.17	398	24	0.05	2,310	5.07
309	8	0.02	920	2.02	354	23	0.05	1,468	3.22	399	23	0.05	2,333	5.12
310	8	0.02	928	2.04	355	7	0.02	1,475	3.24	400	31	0.07	2,364	5.19
311	6	0.01	934	2.05	356	10	0.02	1,485	3.26	401	28	0.06	2,392	5.25
312	7	0.02	941	2.06	357	12	0.03	1,497	3.28	402	29	0.06	2,421	5.31
313	9	0.02	950	2.08	358	14	0.03	1,511	3.32	403	36	0.08	2,457	5.39
314	6	0.01	956	2.10	359	15	0.03	1,526	3.35	404	21	0.05	2,478	5.44
315	7	0.02	963	2.11	360	17	0.04	1,543	3.39	405	38	0.08	2,516	5.52
316	7	0.02	970	2.13	361	14	0.03	1,557	3.42	406	31	0.07	2,547	5.59
317	12	0.03	982	2.15	362	18	0.04	1,575	3.46	407	26	0.06	2,573	5.65
318	7	0.02	989	2.17	363	20	0.04	1,595	3.50	408	37	0.08	2,610	5.73
319	10	0.02	999	2.19	364	14	0.03	1,609	3.53	409	37	0.08	2,647	5.81
320	10	0.02	1,009	2.21	365	15	0.03	1,624	3.56	410	39	0.09	2,686	5.89
321	9	0.02	1,018	2.23	366	17	0.04	1,641	3.60	411	32	0.07	2,718	5.96
322	10	0.02	1,028	2.26	367	18	0.04	1,659	3.64	412	35	0.08	2,753	6.04
323	10	0.02	1,038	2.28	368	25	0.05	1,684	3.69	413	31	0.07	2,784	6.11
324	4	0.01	1,042	2.29	369	16	0.04	1,700	3.73	414	33	0.07	2,817	6.18
325	11	0.02	1,053	2.31	370	16	0.04	1,716	3.77	415	35	0.08	2,852	6.26
326	12	0.03	1,065	2.34	371	22	0.05	1,738	3.81	416	28	0.06	2,880	6.32
327	5	0.01	1,070	2.35	372	17	0.04	1,755	3.85	417	40	0.09	2,920	6.41
328	9	0.02	1,079	2.37	373	12	0.03	1,767	3.88	418	32	0.07	2,952	6.48
329	9	0.02	1,088	2.39	374	17	0.04	1,784	3.91	419	37	0.08	2,989	6.56
330	5	0.01	1,093	2.40	375	22	0.05	1,806	3.96	420	31	0.07	3,020	6.63
331	53	0.12	1,146	2.51	376	29	0.06	1,835	4.03	421	48	0.11	3,068	6.73
332	12	0.03	1,158	2.54	377	20	0.04	1,855	4.07	422	50	0.11	3,118	6.84
333	15	0.03	1,173	2.57	378	18	0.04	1,873	4.11	423	30	0.07	3,148	6.91
334	9	0.02	1,182	2.59	379	22	0.05	1,895	4.16	424	41	0.09	3,189	7.00
335	15	0.03	1,197	2.63	380	16	0.04	1,911	4.19	425	40	0.09	3,229	7.08
336	17	0.04	1,214	2.66	381	19	0.04	1,930	4.23	426	35	0.08	3,264	7.16
337	10	0.02	1,224	2.69	382	14	0.03	1,944	4.27	427	45	0.10	3,309	7.26
338	6	0.01	1,230	2.70	383	24	0.05	1,968	4.32	428	38	0.08	3,347	7.34
339	18	0.04	1,248	2.74	384	23	0.05	1,991	4.37	429	50	0.11	3,397	7.45
340	14	0.03	1,262	2.77	385	19	0.04	2,010	4.41	430	31	0.07	3,428	7.52
341	16	0.04	1,278	2.80	386	16	0.04	2,026	4.45	431	46	0.10	3,474	7.62
342	11	0.02	1,289	2.83	387	17	0.04	2,043	4.48	432	43	0.09	3,517	7.72
343	12	0.03	1,301	2.85	388	15	0.03	2,058	4.52	433	53	0.12	3,570	7.83
344	14	0.03	1,315	2.89	389	16	0.04	2,074	4.55	434	41	0.09	3,611	7.92

Table 31. HS Science Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	48	0.11	3,659	8.03	480	86	0.19	6,460	14.17	525	124	0.27	10,908	23.93
436	46	0.10	3,705	8.13	481	79	0.17	6,539	14.35	526	119	0.26	11,027	24.19
437	50	0.11	3,755	8.24	482	78	0.17	6,617	14.52	527	105	0.23	11,132	24.42
438	58	0.13	3,813	8.37	483	92	0.20	6,709	14.72	528	141	0.31	11,273	24.73
439	62	0.14	3,875	8.50	484	78	0.17	6,787	14.89	529	105	0.23	11,378	24.96
440	47	0.10	3,922	8.61	485	91	0.20	6,878	15.09	530	131	0.29	11,509	25.25
441	54	0.12	3,976	8.72	486	81	0.18	6,959	15.27	531	132	0.29	11,641	25.54
442	46	0.10	4,022	8.82	487	92	0.20	7,051	15.47	532	115	0.25	11,756	25.79
443	47	0.10	4,069	8.93	488	85	0.19	7,136	15.66	533	135	0.30	11,891	26.09
444	55	0.12	4,124	9.05	489	91	0.20	7,227	15.86	534	148	0.32	12,039	26.41
445	49	0.11	4,173	9.16	490	76	0.17	7,303	16.02	535	128	0.28	12,167	26.70
446	59	0.13	4,232	9.29	491	94	0.21	7,397	16.23	536	140	0.31	12,307	27.00
447	56	0.12	4,288	9.41	492	97	0.21	7,494	16.44	537	149	0.33	12,456	27.33
448	48	0.11	4,336	9.51	493	100	0.22	7,594	16.66	538	136	0.30	12,592	27.63
449	65	0.14	4,401	9.66	494	80	0.18	7,674	16.84	539	144	0.32	12,736	27.94
450	49	0.11	4,450	9.76	495	93	0.20	7,767	17.04	540	137	0.30	12,873	28.24
451	47	0.10	4,497	9.87	496	87	0.19	7,854	17.23	541	126	0.28	12,999	28.52
452	67	0.15	4,564	10.01	497	82	0.18	7,936	17.41	542	127	0.28	13,126	28.80
453	46	0.10	4,610	10.11	498	81	0.18	8,017	17.59	543	139	0.30	13,265	29.10
454	54	0.12	4,664	10.23	499	80	0.18	8,097	17.77	544	111	0.24	13,376	29.35
455	57	0.13	4,721	10.36	500	98	0.22	8,195	17.98	545	142	0.31	13,518	29.66
456	60	0.13	4,781	10.49	501	88	0.19	8,283	18.17	546	125	0.27	13,643	29.93
457	61	0.13	4,842	10.62	502	105	0.23	8,388	18.40	547	151	0.33	13,794	30.27
458	78	0.17	4,920	10.79	503	105	0.23	8,493	18.63	548	113	0.25	13,907	30.51
459	64	0.14	4,984	10.94	504	80	0.18	8,573	18.81	549	136	0.30	14,043	30.81
460	52	0.11	5,036	11.05	505	108	0.24	8,681	19.05	550	143	0.31	14,186	31.13
461	65	0.14	5,101	11.19	506	101	0.22	8,782	19.27	551	125	0.27	14,311	31.40
462	63	0.14	5,164	11.33	507	100	0.22	8,882	19.49	552	153	0.34	14,464	31.74
463	74	0.16	5,238	11.49	508	96	0.21	8,978	19.70	553	124	0.27	14,588	32.01
464	68	0.15	5,306	11.64	509	107	0.23	9,085	19.93	554	149	0.33	14,737	32.33
465	65	0.14	5,371	11.78	510	122	0.27	9,207	20.20	555	143	0.31	14,880	32.65
466	65	0.14	5,436	11.93	511	103	0.23	9,310	20.43	556	140	0.31	15,020	32.96
467	68	0.15	5,504	12.08	512	104	0.23	9,414	20.66	557	153	0.34	15,173	33.29
468	70	0.15	5,574	12.23	513	99	0.22	9,513	20.87	558	149	0.33	15,322	33.62
469	57	0.13	5,631	12.35	514	117	0.26	9,630	21.13	559	152	0.33	15,474	33.95
470	69	0.15	5,700	12.51	515	117	0.26	9,747	21.39	560	144	0.32	15,618	34.27
471	82	0.18	5,782	12.69	516	108	0.24	9,855	21.62	561	155	0.34	15,773	34.61
472	75	0.16	5,857	12.85	517	112	0.25	9,967	21.87	562	150	0.33	15,923	34.94
473	61	0.13	5,918	12.98	518	124	0.27	10,091	22.14	563	161	0.35	16,084	35.29
474	66	0.14	5,984	13.13	519	121	0.27	10,212	22.41	564	152	0.33	16,236	35.62
475	76	0.17	6,060	13.30	520	105	0.23	10,317	22.64	565	135	0.30	16,371	35.92
476	83	0.18	6,143	13.48	521	115	0.25	10,432	22.89	566	135	0.30	16,506	36.22
477	80	0.18	6,223	13.65	522	114	0.25	10,546	23.14	567	167	0.37	16,673	36.58
478	82	0.18	6,305	13.83	523	121	0.27	10,667	23.40	568	159	0.35	16,832	36.93
479	69	0.15	6,374	13.99	524	117	0.26	10,784	23.66	569	182	0.40	17,014	37.33

Table 31. HS Science Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	161	0.35	17,175	37.68	615	183	0.40	24,745	54.29	660	155	0.34	32,521	71.35
571	173	0.38	17,348	38.06	616	171	0.38	24,916	54.67	661	148	0.32	32,669	71.68
572	157	0.34	17,505	38.41	617	172	0.38	25,088	55.05	662	153	0.34	32,822	72.01
573	165	0.36	17,670	38.77	618	184	0.40	25,272	55.45	663	163	0.36	32,985	72.37
574	173	0.38	17,843	39.15	619	170	0.37	25,442	55.82	664	152	0.33	33,137	72.71
575	178	0.39	18,021	39.54	620	199	0.44	25,641	56.26	665	159	0.35	33,296	73.05
576	160	0.35	18,181	39.89	621	180	0.39	25,821	56.65	666	162	0.36	33,458	73.41
577	139	0.30	18,320	40.20	622	188	0.41	26,009	57.07	667	168	0.37	33,626	73.78
578	155	0.34	18,475	40.54	623	192	0.42	26,201	57.49	668	178	0.39	33,804	74.17
579	162	0.36	18,637	40.89	624	181	0.40	26,382	57.88	669	155	0.34	33,959	74.51
580	169	0.37	18,806	41.26	625	195	0.43	26,577	58.31	670	144	0.32	34,103	74.83
581	147	0.32	18,953	41.58	626	193	0.42	26,770	58.74	671	133	0.29	34,236	75.12
582	144	0.32	19,097	41.90	627	187	0.41	26,957	59.15	672	142	0.31	34,378	75.43
583	146	0.32	19,243	42.22	628	149	0.33	27,106	59.47	673	156	0.34	34,534	75.77
584	162	0.36	19,405	42.58	629	160	0.35	27,266	59.82	674	155	0.34	34,689	76.11
585	162	0.36	19,567	42.93	630	172	0.38	27,438	60.20	675	155	0.34	34,844	76.45
586	148	0.32	19,715	43.26	631	175	0.38	27,613	60.59	676	161	0.35	35,005	76.80
587	173	0.38	19,888	43.64	632	201	0.44	27,814	61.03	677	141	0.31	35,146	77.11
588	171	0.38	20,059	44.01	633	160	0.35	27,974	61.38	678	159	0.35	35,305	77.46
589	156	0.34	20,215	44.35	634	159	0.35	28,133	61.73	679	134	0.29	35,439	77.76
590	180	0.39	20,395	44.75	635	168	0.37	28,301	62.09	680	144	0.32	35,583	78.07
591	159	0.35	20,554	45.10	636	183	0.40	28,484	62.50	681	150	0.33	35,733	78.40
592	179	0.39	20,733	45.49	637	171	0.38	28,655	62.87	682	125	0.27	35,858	78.68
593	183	0.40	20,916	45.89	638	172	0.38	28,827	63.25	683	147	0.32	36,005	79.00
594	180	0.39	21,096	46.29	639	165	0.36	28,992	63.61	684	146	0.32	36,151	79.32
595	162	0.36	21,258	46.64	640	169	0.37	29,161	63.98	685	120	0.26	36,271	79.58
596	197	0.43	21,455	47.07	641	166	0.36	29,327	64.35	686	133	0.29	36,404	79.87
597	173	0.38	21,628	47.45	642	193	0.42	29,520	64.77	687	135	0.30	36,539	80.17
598	173	0.38	21,801	47.83	643	184	0.40	29,704	65.17	688	143	0.31	36,682	80.48
599	163	0.36	21,964	48.19	644	163	0.36	29,867	65.53	689	124	0.27	36,806	80.76
600	165	0.36	22,129	48.55	645	177	0.39	30,044	65.92	690	130	0.29	36,936	81.04
601	156	0.34	22,285	48.90	646	170	0.37	30,214	66.29	691	120	0.26	37,056	81.30
602	167	0.37	22,452	49.26	647	170	0.37	30,384	66.67	692	136	0.30	37,192	81.60
603	165	0.36	22,617	49.62	648	149	0.33	30,533	66.99	693	137	0.30	37,329	81.90
604	163	0.36	22,780	49.98	649	171	0.38	30,704	67.37	694	115	0.25	37,444	82.16
605	183	0.40	22,963	50.38	650	180	0.39	30,884	67.76	695	126	0.28	37,570	82.43
606	171	0.38	23,134	50.76	651	160	0.35	31,044	68.11	696	122	0.27	37,692	82.70
607	182	0.40	23,316	51.16	652	170	0.37	31,214	68.49	697	130	0.29	37,822	82.98
608	189	0.41	23,505	51.57	653	154	0.34	31,368	68.82	698	130	0.29	37,952	83.27
609	172	0.38	23,677	51.95	654	154	0.34	31,522	69.16	699	111	0.24	38,063	83.51
610	163	0.36	23,840	52.31	655	149	0.33	31,671	69.49	700	125	0.27	38,188	83.79
611	155	0.34	23,995	52.65	656	189	0.41	31,860	69.90	701	129	0.28	38,317	84.07
612	169	0.37	24,164	53.02	657	157	0.34	32,017	70.25	702	144	0.32	38,461	84.39
613	200	0.44	24,364	53.46	658	175	0.38	32,192	70.63	703	128	0.28	38,589	84.67
614	198	0.43	24,562	53.89	659	174	0.38	32,366	71.01	704	136	0.30	38,725	84.97

Table 31. HS Science Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	134	0.29	38,859	85.26	750	63	0.14	42,957	94.25	795	25	0.05	44,791	98.28
706	104	0.23	38,963	85.49	751	61	0.13	43,018	94.39	796	17	0.04	44,808	98.31
707	100	0.22	39,063	85.71	752	57	0.13	43,075	94.51	797	27	0.06	44,835	98.37
708	132	0.29	39,195	86.00	753	54	0.12	43,129	94.63	798	24	0.05	44,859	98.42
709	110	0.24	39,305	86.24	754	59	0.13	43,188	94.76	799	22	0.05	44,881	98.47
710	111	0.24	39,416	86.48	755	64	0.14	43,252	94.90	800	23	0.05	44,904	98.52
711	103	0.23	39,519	86.71	756	56	0.12	43,308	95.02	801	24	0.05	44,928	98.58
712	117	0.26	39,636	86.96	757	54	0.12	43,362	95.14	802	16	0.04	44,944	98.61
713	108	0.24	39,744	87.20	758	53	0.12	43,415	95.26	803	22	0.05	44,966	98.66
714	105	0.23	39,849	87.43	759	42	0.09	43,457	95.35	804	13	0.03	44,979	98.69
715	98	0.22	39,947	87.65	760	48	0.11	43,505	95.45	805	16	0.04	44,995	98.72
716	96	0.21	40,043	87.86	761	45	0.10	43,550	95.55	806	23	0.05	45,018	98.77
717	107	0.23	40,150	88.09	762	61	0.13	43,611	95.69	807	16	0.04	45,034	98.81
718	114	0.25	40,264	88.34	763	60	0.13	43,671	95.82	808	16	0.04	45,050	98.84
719	106	0.23	40,370	88.58	764	64	0.14	43,735	95.96	809	16	0.04	45,066	98.88
720	100	0.22	40,470	88.79	765	43	0.09	43,778	96.05	810	17	0.04	45,083	98.92
721	88	0.19	40,558	88.99	766	40	0.09	43,818	96.14	811	23	0.05	45,106	98.97
722	89	0.20	40,647	89.18	767	51	0.11	43,869	96.25	812	13	0.03	45,119	99.00
723	110	0.24	40,757	89.42	768	50	0.11	43,919	96.36	813	17	0.04	45,136	99.03
724	103	0.23	40,860	89.65	769	39	0.09	43,958	96.45	814	11	0.02	45,147	99.06
725	89	0.20	40,949	89.85	770	49	0.11	44,007	96.56	815	17	0.04	45,164	99.09
726	93	0.20	41,042	90.05	771	28	0.06	44,035	96.62	816	16	0.04	45,180	99.13
727	92	0.20	41,134	90.25	772	41	0.09	44,076	96.71	817	10	0.02	45,190	99.15
728	99	0.22	41,233	90.47	773	32	0.07	44,108	96.78	818	18	0.04	45,208	99.19
729	103	0.23	41,336	90.69	774	38	0.08	44,146	96.86	819	12	0.03	45,220	99.22
730	91	0.20	41,427	90.89	775	34	0.07	44,180	96.93	820	13	0.03	45,233	99.25
731	81	0.18	41,508	91.07	776	37	0.08	44,217	97.02	821	16	0.04	45,249	99.28
732	85	0.19	41,593	91.26	777	36	0.08	44,253	97.10	822	16	0.04	45,265	99.32
733	93	0.20	41,686	91.46	778	40	0.09	44,293	97.18	823	10	0.02	45,275	99.34
734	87	0.19	41,773	91.65	779	39	0.09	44,332	97.27	824	8	0.02	45,283	99.35
735	89	0.20	41,862	91.85	780	33	0.07	44,365	97.34	825	13	0.03	45,296	99.38
736	89	0.20	41,951	92.04	781	28	0.06	44,393	97.40	826	9	0.02	45,305	99.40
737	73	0.16	42,024	92.20	782	38	0.08	44,431	97.49	827	7	0.02	45,312	99.42
738	87	0.19	42,111	92.40	783	38	0.08	44,469	97.57	828	9	0.02	45,321	99.44
739	81	0.18	42,192	92.57	784	25	0.05	44,494	97.62	829	11	0.02	45,332	99.46
740	70	0.15	42,262	92.73	785	30	0.07	44,524	97.69	830	11	0.02	45,343	99.49
741	74	0.16	42,336	92.89	786	39	0.09	44,563	97.78	831	9	0.02	45,352	99.51
742	75	0.16	42,411	93.05	787	22	0.05	44,585	97.82	832	9	0.02	45,361	99.53
743	73	0.16	42,484	93.21	788	18	0.04	44,603	97.86	833	10	0.02	45,371	99.55
744	71	0.16	42,555	93.37	789	30	0.07	44,633	97.93	834	6	0.01	45,377	99.56
745	65	0.14	42,620	93.51	790	22	0.05	44,655	97.98	835	7	0.02	45,384	99.58
746	71	0.16	42,691	93.67	791	25	0.05	44,680	98.03	836	5	0.01	45,389	99.59
747	79	0.17	42,770	93.84	792	41	0.09	44,721	98.12	837	5	0.01	45,394	99.60
748	72	0.16	42,842	94.00	793	22	0.05	44,743	98.17	838	8	0.02	45,402	99.62
749	52	0.11	42,894	94.11	794	23	0.05	44,766	98.22	839	5	0.01	45,407	99.63

Table 31. HS Science Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	6	0.01	45,413	99.64	893	3	0.01	45,554	99.95
841	5	0.01	45,418	99.65	896	1	0.00	45,555	99.95
842	10	0.02	45,428	99.67	897	2	0.00	45,557	99.96
843	3	0.01	45,431	99.68	899	1	0.00	45,558	99.96
844	3	0.01	45,434	99.69	900	19	0.04	45,577	100.00
845	3	0.01	45,437	99.69					
846	6	0.01	45,443	99.71					
847	3	0.01	45,446	99.71					
848	7	0.02	45,453	99.73					
849	6	0.01	45,459	99.74					
850	2	0.00	45,461	99.75					
851	2	0.00	45,463	99.75					
852	7	0.02	45,470	99.77					
853	3	0.01	45,473	99.77					
854	3	0.01	45,476	99.78					
855	4	0.01	45,480	99.79					
856	4	0.01	45,484	99.80					
857	4	0.01	45,488	99.80					
858	2	0.00	45,490	99.81					
859	3	0.01	45,493	99.82					
860	3	0.01	45,496	99.82					
861	3	0.01	45,499	99.83					
862	2	0.00	45,501	99.83					
863	2	0.00	45,503	99.84					
864	4	0.01	45,507	99.85					
865	3	0.01	45,510	99.85					
866	6	0.01	45,516	99.87					
867	4	0.01	45,520	99.87					
868	1	0.00	45,521	99.88					
869	2	0.00	45,523	99.88					
871	2	0.00	45,525	99.89					
872	1	0.00	45,526	99.89					
873	3	0.01	45,529	99.89					
875	2	0.00	45,531	99.90					
876	1	0.00	45,532	99.90					
877	3	0.01	45,535	99.91					
878	4	0.01	45,539	99.92					
879	3	0.01	45,542	99.92					
880	1	0.00	45,543	99.93					
881	2	0.00	45,545	99.93					
884	1	0.00	45,546	99.93					
885	1	0.00	45,547	99.93					
888	1	0.00	45,548	99.94					
890	2	0.00	45,550	99.94					
891	1	0.00	45,551	99.94					

Table 32. Scale Score Performance Summary

Content Area	Grade	N	Mean	SD	Median
Social Studies	4	63,246	606	117	618
	7	59,723	601	109	609
	HS	45,501	596	108	607
Science	5	62,857	600	110	609
	8	57,894	585	113	593
	HS	45,577	595	109	605

Table 33. Performance Level Distribution

Content Area	Grade	Limited Command	Moderate Command	Strong Command	Distinguished Command
Social Studies	4	29.8%	48.3%	18.2%	3.6%
	7	43.5%	38.9%	13.1%	4.5%
	HS**	n/a	n/a	n/a	n/a
Science	5	29.1%	36.1%	30.5%	4.4%
	8	36.7%	34.3%	26.5%	2.5%
	HS	28.8%	46.6%	21.4%	3.2%

*Percentages may not sum to 100 due to rounding.

**No cut scores have been approved for high school social studies.

Table 34. Scale Score Performance Summary by Content Standard

Content Area	Grade	Content Standard											
		1			2			3			4		
		Mean	SD	Mdn*	Mean	SD	Mdn*	Mean	SD	Mdn*	Mean	SD	Mdn*
Social Studies	4	603	133.7	617	605	134.1	618	604	139.4	619	604	134.5	616
	7	599	122.1	610	600	121.6	608	599	137.0	610	600	123.6	610
	HS	578	141.1	608	596	121.1	606	597	126.4	608	592	124.4	608
Science	5	596	125.9	607	600	116.4	608	600	118.3	607	599	118.3	608
	8	584	121.9	591	584	124.1	593	585	123.3	595	584	125.3	592
	HS	590	122.9	602	589	125.1	605	590	122.2	605	593	121.4	605

*Mdn = median

Table 35. Scale Score Performance Summary by Item Type

Content Area	Grade	Selected-Response		Constructed-Response	
		Mean	SD	Mean	SD
Social Studies	4	606	125.8	605	126.4
	7	600	124.0	601	116.9
	HS	596	119.1	592	119.6
Science	5	602	114.1	597	117.9
	8	585	118.4	584	119.5
	HS	596	112.2	586	126.0

Table 36. HS Social Studies Percent Correct Performance Summary by PGC

Content Standard	PGC	Mean	SD	Average Percent Correct
History	1	2.0	1.9	25.3%
	2	5.1	2.6	38.9%
Geography	1	7.5	3.4	53.7%
	2	2.2	1.4	37.3%
Economics	1	2.2	1.4	32.1%
	2	5.3	1.9	53.2%
Civics	1	2.0	1.3	33.7%
	2	6.1	2.9	46.7%

Table 37. HS Science Percent Correct Performance Summary by PGC

Content Standard	PGC	Mean	SD	Average Percent Correct
Physical Science	1	2.7	1.5	44.9%
	2	3.6	2.5	27.4%
	3	2.5	1.8	35.8%
Life Science	1	2.6	1.6	43.4%
	2	2.3	1.9	20.6%
	3	2.5	1.6	35.7%
	4	n/a	n/a	n/a
Earth Systems Science	1	2.3	1.9	28.6%
	2	5.4	2.6	41.3%
	3	2.2	1.4	37.5%

*n/a represents a PGC where there are too few points to reliably report out on.

Table 38. HS Social Studies Selected-Response Classical Statistics

Item	% Omit	p-value	Item- Total Corr.
1	0.45	0.45	0.26
2	0.06	0.54	0.10
3	0.29	0.73	0.49
4	0.33	0.41	0.32
5	0.30	0.26	0.27
6	0.12	0.38	0.39
7	0.30	0.42	0.51
8	0.10	0.38	0.29
9	0.12	0.59	0.30
10	0.31	0.38	0.39
11	0.09	0.68	0.35
12	0.29	0.71	0.41
13	0.13	0.66	0.56
14	0.53	0.58	0.33
15	0.14	0.47	0.18
16	0.28	0.52	0.53
17	0.30	0.50	0.47
18	0.12	0.45	0.36
19	0.24	0.60	0.38
20	0.13	0.75	0.45
21	0.14	0.32	0.19
22	0.14	0.68	0.41
23	0.25	0.35	0.13
24	0.17	0.55	0.55
25	0.23	0.52	0.60
26	0.25	0.55	0.36
27	2.09	0.04	0.07
28	0.59	0.61	0.49
29	0.78	0.55	0.44
30	0.26	0.42	0.22
31	0.92	0.76	0.40
32	0.48	0.58	0.38
33	0.22	0.60	0.49
34	0.21	0.58	0.42
35	0.19	0.47	0.31
36	1.45	0.77	0.47
37	0.69	0.43	0.26
38	1.93	0.52	0.29
39	1.85	0.52	0.08
40	0.43	0.59	0.40

Table 39. HS Social Studies Constructed-Response Classical Statistics

Item	Omit %	%0	%1	%2	%3	%4	%5	%6	%7	p-value	Item-Total Corr.
1	1.46	12.17	32.63	38.70	15.04					0.52	0.55
2	2.37	25.61	51.34	16.78	3.90					0.32	0.56
3	5.78	50.74	29.43	11.17	2.87					0.20	0.64
4	2.63	44.52	37.48	12.67	2.70					0.24	0.54
5	4.79	40.55	36.84	16.23	1.60					0.25	0.63
6	3.67	24.53	54.08	15.07	2.65					0.31	0.59
7	3.82	23.10	28.51	34.18	10.40					0.43	0.70
8	3.25	42.63	31.73	18.50	3.88					0.27	0.67
9	3.27	29.93	35.92	25.56	5.32					0.34	0.64
10	3.15	22.75	18.89	32.71	22.50					0.51	0.65
11	4.26	33.59	18.86	22.91	5.97	9.26	1.53	2.50	1.12	0.21	0.71

Table 40. HS Science Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.	Item	% Omit	p-value	Item-Total Corr.
1	2.91	0.08	0.20	26	0.48	0.37	0.34
2	0.25	0.47	0.36	27	0.18	0.53	0.51
3	0.10	0.44	0.18	28	0.30	0.50	0.40
4	0.40	0.21	0.37	29	0.48	0.51	0.49
5	0.12	0.77	0.40	30	0.30	0.48	0.50
6	0.15	0.71	0.44	31	0.25	0.34	0.22
7	0.04	0.42	0.18	32	0.46	0.53	0.30
8	0.32	0.40	0.43	33	0.13	0.70	0.40
9	0.38	0.35	0.20	34	0.92	0.76	0.47
10	0.15	0.53	0.52	35	0.43	0.37	0.43
11	0.17	0.45	0.39	36	0.69	0.28	0.53
12	0.19	0.54	0.57	37	0.76	0.25	0.30
13	0.16	0.45	0.54	38	0.49	0.27	0.48
14	0.18	0.62	0.30	39	0.23	0.32	0.37
15	0.15	0.31	0.30	40	0.23	0.13	0.11
16	0.41	0.53	0.41	41	0.44	0.08	0.27
17	0.71	0.33	0.54	42	0.28	0.16	0.36
18	0.39	0.67	0.47	43	0.51	0.07	0.22
19	0.15	0.50	0.39				
20	0.23	0.69	0.54				
21	0.84	0.21	0.27				
22	0.39	0.55	0.37				
23	0.12	0.26	0.18				
24	0.21	0.29	0.26				
25	0.12	0.46	0.18				

Table 41. HS Science Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	2	3.93	55.51	33.93	6.62	.	0.24	0.62
2	2	5.02	58.45	23.44	13.09	.	0.25	0.56
3	2	5.65	79.58	6.85	7.93	.	0.11	0.54
4	2	2.89	56.89	31.25	8.97	.	0.25	0.51
5	2	4.38	55.31	38.65	1.66	.	0.21	0.46
6	2	2.83	43.50	35.81	17.86	.	0.36	0.59
7	2	6.80	87.80	4.12	1.28	.	0.03	0.34
8	2	1.02	62.24	22.56	14.19	.	0.25	0.63
9	2	2.63	47.03	30.85	19.48	.	0.35	0.63
10	2	4.02	75.80	14.53	5.65	.	0.13	0.49
11	2	4.40	77.46	14.98	3.17	.	0.11	0.45
12	2	3.76	59.01	35.41	1.82	.	0.20	0.55
13	2	4.40	36.90	55.31	3.39	.	0.31	0.51
14	2	3.25	58.71	29.78	8.26	.	0.23	0.51
15	3	1.89	48.71	24.92	17.49	6.99	0.27	0.63
16	3	3.55	45.57	33.20	13.84	3.83	0.24	0.65
17	3	3.87	52.87	27.57	9.12	6.57	0.22	0.60

Table 42. Correlations Between Content Standards

Grade	Content Standard	2	3	4	Full Test
4	1	0.70	0.68	0.72	0.88
	2		0.69	0.69	0.87
	3			0.68	0.86
	4				0.88
5	1	0.78	0.78	0.86	0.89
	2		0.84	0.90	0.95
	3			0.88	0.94
	4				0.95
7	1	0.79	0.71	0.79	0.92
	2		0.71	0.77	0.91
	3			0.71	0.84
	4				0.91
8	1	0.80	0.81	0.86	0.93
	2		0.81	0.85	0.93
	3			0.86	0.94
	4				0.92
HS SS	1	0.75	0.67	0.74	0.86
	2		0.71	0.79	0.92
	3			0.71	0.84
	4				0.91
HS Sci	1	0.76	0.77	0.85	0.91
	2		0.78	0.86	0.91
	3			0.85	0.92
	4				0.93

Table 43. Number of Items Field Tested

	Grade 4	Grade 7	Grade 5	Grade 8	HS SS	HS Sci
Number of Field Test Forms	24	20	15	18	23	18
Number of Items Field Tested	124	125	152	169	157	180

Table 44. Data Review Outcomes

	Grade 4	Grade 7	Grade 5	Grade 8	HS Social Studies	HS Science
Number of Items Field Tested	124	125	152	169	157	180
Number of Items Flagged and Reviewed	42	48	35	39	69	69
Data Review Outcome						
• Accept	30	40	27	29	59	57
• Reject	2	0	4	7	4	8
• Revise and Re-Field Test	10	8	4	3	6	4

Table 45. Grade 4 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	0.908	1.328	.	0.000	0.920	0.109	-1.029	No
2	CR	GPC	0.620	0.311	.	0.000	-0.857	0.671	0.186	Yes
3	CR	GPC	0.829	0.631	.	0.000	1.216	-0.406	-0.810	No
4	CR	GPC	0.793	-0.728	.	0.000	0.783	1.117	-1.900	No
5	CR	GPC	0.972	0.518	.	0.000	1.527	0.106	-1.634	No
6	CR	GPC	0.823	1.728	.	0.000	2.332	-0.141	-2.191	No
7	CR	GPC	0.692	1.536	.	0.000	0.575	0.229	-0.804	No
8	CR	GPC	0.719	2.261	.	0.000	1.375	0.271	-1.645	No
9	CR	GPC	1.098	1.033	.	0.000	1.758	-0.067	-1.692	No
10	CR	GPC	0.931	0.903	.	0.000	1.671	-0.103	-1.568	No
11	CR	GPC	0.653	1.363	.	0.000	1.088	0.499	-1.587	No
12	CR	GPC	0.605	0.632	.	0.000	-0.029	-0.509	0.537	No
13	SR	3PL	1.525	0.028	0.235	.	.	.	.	No
14	SR	3PL	1.298	0.404	0.125	.	.	.	.	No
15	SR	3PL	0.675	-1.606	0.057	.	.	.	.	No
16	SR	3PL	1.198	-1.618	0.195	.	.	.	.	No
17	SR	3PL	1.170	0.360	0.207	.	.	.	.	No
18	SR	3PL	1.260	0.664	0.268	.	.	.	.	No
19	SR	3PL	1.676	1.764	0.197	.	.	.	.	No
20	SR	3PL	1.231	2.132	0.153	.	.	.	.	No
21	SR	3PL	1.441	0.808	0.136	.	.	.	.	No
22	SR	3PL	0.766	-0.636	0.045	.	.	.	.	No
23	SR	3PL	1.134	1.775	0.324	.	.	.	.	No
24	SR	3PL	1.593	1.098	0.222	.	.	.	.	No
25	SR	3PL	1.518	0.330	0.353	.	.	.	.	No
26	SR	3PL	1.416	1.220	0.237	.	.	.	.	No
27	SR	3PL	0.326	-0.542	0.078	.	.	.	.	No
28	SR	3PL	1.813	1.849	0.171	.	.	.	.	No
29	SR	3PL	0.557	0.143	0.083	.	.	.	.	No
30	SR	3PL	1.332	-0.135	0.062	.	.	.	.	No
31	SR	3PL	0.982	0.327	0.269	.	.	.	.	No
32	SR	3PL	1.772	1.931	0.206	.	.	.	.	No
33	SR	3PL	1.207	2.123	0.194	.	.	.	.	No
34	SR	3PL	0.778	2.225	0.365	.	.	.	.	No
35	SR	3PL	0.767	0.227	0.106	.	.	.	.	No
36	SR	3PL	1.311	0.609	0.318	.	.	.	.	No
37	SR	3PL	0.632	0.562	0.028	.	.	.	.	No
38	XI	3PL	1.167	1.052	0.200	.	.	.	.	No
39	XI	2PL	1.426	0.738	.	.	.	.	.	No
40	XI	3PL	0.684	0.273	0.103	.	.	.	.	No
41	XI	3PL	0.313	3.509	0.017	.	.	.	.	No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	XI	2PL	0.979	1.176	.	.	.	.	.	No
43	XI	3PL	0.700	2.652	0.145	.	.	.	.	No
44	XI	2PL	0.619	-1.063	.	.	.	.	.	Yes
45	XI	3PL	0.715	0.155	0.076	.	.	.	.	No
46	XI	3PL	1.700	-0.088	0.227	.	.	.	.	No
47	XI	3PL	1.437	-0.627	0.127	.	.	.	.	No
48	XI	3PL	1.215	0.915	0.190	.	.	.	.	No
49	XI	3PL	1.016	-0.030	0.000	.	.	.	.	No
50	XI	3PL	0.274	2.598	0.072	.	.	.	.	No
51	XI	3PL	1.121	1.474	0.154	.	.	.	.	No

Table 46. Grade 5 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.025	0.343	.	0.000	1.284	-1.284	.	No
2	CR	GPC	1.152	2.076	.	0.000	1.314	-1.314	.	No
3	CR	GPC	0.999	1.848	.	0.000	1.419	-1.419	.	No
4	CR	GPC	0.787	-0.270	.	0.000	1.345	-1.345	.	Yes
5	CR	GPC	0.836	0.487	.	0.000	0.491	-0.491	.	No
6	CR	GPC	1.262	-0.929	.	0.000	1.487	-1.487	.	No
7	CR	GPC	0.707	0.558	.	0.000	0.463	-0.463	.	No
8	CR	GPC	1.271	1.263	.	0.000	1.196	-1.196	.	No
9	CR	GPC	0.713	0.701	.	0.000	0.720	-0.720	.	No
10	CR	GPC	1.122	0.924	.	0.000	1.014	-1.014	.	No
11	CR	GPC	1.271	0.429	.	0.000	0.875	-0.875	.	No
12	CR	GPC	0.861	0.404	.	0.000	0.788	-0.788	.	No
13	CR	GPC	1.138	1.105	.	0.000	-1.020	1.020	.	No
14	CR	GPC	1.067	0.387	.	0.000	-0.290	0.290	.	Yes
15	CR	GPC	0.888	1.056	.	0.000	1.499	-0.016	-1.483	No
16	CR	GPC	0.743	0.839	.	0.000	0.483	1.272	-1.755	No
17	CR	GPC	1.047	0.683	.	0.000	0.627	-0.342	-0.285	No
18	SR	3PL	1.514	-1.107	0.126	.	.	.	.	No
19	SR	3PL	2.046	-0.524	0.176	.	.	.	.	No
20	SR	3PL	1.385	-1.159	0.219	.	.	.	.	No
21	SR	3PL	1.221	0.111	0.281	.	.	.	.	No
22	SR	3PL	1.841	0.028	0.292	.	.	.	.	No
23	SR	3PL	1.356	-0.945	0.265	.	.	.	.	No
24	SR	3PL	1.877	-1.257	0.324	.	.	.	.	No
25	SR	3PL	1.090	-0.828	0.239	.	.	.	.	No
26	SR	3PL	0.877	-0.319	0.074	.	.	.	.	No
27	SR	3PL	1.171	0.567	0.099	.	.	.	.	No
28	SR	3PL	1.271	-0.617	0.212	.	.	.	.	No
29	SR	3PL	1.372	-0.400	0.197	.	.	.	.	No
30	SR	3PL	1.768	0.294	0.223	.	.	.	.	No
31	SR	3PL	0.753	-2.484	0.049	.	.	.	.	No
32	SR	3PL	2.102	-1.887	0.033	.	.	.	.	No
33	SR	3PL	1.658	-0.861	0.278	.	.	.	.	No
34	SR	3PL	0.837	1.564	0.226	.	.	.	.	No
35	SR	3PL	1.451	0.572	0.495	.	.	.	.	No
36	SR	3PL	1.302	-0.272	0.219	.	.	.	.	No
37	SR	3PL	1.979	-0.512	0.326	.	.	.	.	No
38	SR	3PL	0.917	0.521	0.319	.	.	.	.	No
39	SR	3PL	1.430	-0.518	0.124	.	.	.	.	No
40	SR	3PL	1.195	0.625	0.074	.	.	.	.	No
41	SR	3PL	1.528	-0.421	0.321	.	.	.	.	No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	SR	3PL	0.838	0.314	0.474	.	.	.	.	No
43	SR	3PL	0.524	-3.228	0.064	.	.	.	.	No
44	SR	3PL	1.904	0.051	0.124	.	.	.	.	No
45	SR	3PL	1.222	-0.420	0.209	.	.	.	.	No
46	XI	2PL	1.114	-0.087	.	.	.	.	.	No
47	XI	2PL	0.692	-0.439	.	.	.	.	.	No
48	XI	2PL	1.070	0.198	.	.	.	.	.	No
49	XI	2PL	1.202	1.429	.	.	.	.	.	No
50	XI	2PL	1.068	-0.859	.	.	.	.	.	No
51	XI	3PL	0.959	-0.039	0.009	.	.	.	.	No
52	XI	3PL	1.837	1.584	0.082	.	.	.	.	No
53	XI	2PL	0.785	2.113	.	.	.	.	.	No
54	XI	3PL	2.058	1.371	0.171	.	.	.	.	No
55	XI	3PL	1.401	0.820	0.043	.	.	.	.	No
56	XI	3PL	0.331	1.287	0.079	.	.	.	.	No
57	XI	2PL	1.140	-1.157	.	.	.	.	.	No
58	XI	2PL	1.247	-0.920	.	.	.	.	.	No
59	XI	2PL	1.312	1.384	.	.	.	.	.	No
60	XI	3PL	1.235	0.908	0.060	.	.	.	.	No

Table 47. Grade 7 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	0.842	-0.328	.	0.000	0.387	0.507	-0.894	Yes
2	CR	GPC	1.341	0.348	.	0.000	1.629	0.092	-1.721	No
3	CR	GPC	0.752	-0.474	.	0.000	2.504	-1.263	-1.241	No
4	CR	GPC	0.851	0.601	.	0.000	0.709	0.735	-1.444	No
5	CR	GPC	1.226	0.376	.	0.000	1.616	-1.109	-0.507	No
6	CR	GPC	1.048	0.454	.	0.000	1.547	-0.284	-1.263	No
7	CR	GPC	1.301	0.676	.	0.000	1.200	-0.099	-1.101	No
8	CR	GPC	1.358	1.318	.	0.000	1.586	-0.353	-1.233	No
9	CR	GPC	1.070	-0.475	.	0.000	0.610	1.005	-1.616	No
10	CR	GPC	1.220	-0.090	.	0.000	1.378	-0.021	-1.357	No
11	CR	GPC	1.049	0.435	.	0.000	0.740	-0.340	-0.400	No
12	CR	GPC	0.715	0.611	.	0.000	1.296	0.528	-1.824	No
13	MC	3PL	1.541	0.896	0.076	.	.	.	.	No
14	MC	3PL	0.827	0.898	0.116	.	.	.	.	No
15	MC	3PL	1.347	-0.619	0.338	.	.	.	.	No
16	MC	3PL	1.527	0.981	0.265	.	.	.	.	No
17	MC	3PL	1.945	-0.026	0.265	.	.	.	.	No
18	MC	3PL	1.027	0.418	0.025	.	.	.	.	No
19	MC	3PL	0.852	-0.331	0.266	.	.	.	.	No
20	MC	3PL	1.146	0.689	0.104	.	.	.	.	No
21	MC	3PL	2.221	-0.120	0.263	.	.	.	.	No
22	MC	3PL	1.530	0.678	0.473	.	.	.	.	No
23	MC	3PL	0.523	-0.258	0.058	.	.	.	.	No
24	MC	3PL	1.502	1.383	0.273	.	.	.	.	No
25	MC	3PL	0.788	0.271	0.241	.	.	.	.	No
26	MC	3PL	0.747	-1.222	0.018	.	.	.	.	No
27	MC	3PL	1.248	1.050	0.181	.	.	.	.	No
28	MC	3PL	1.466	0.921	0.151	.	.	.	.	No
29	MC	3PL	2.451	0.349	0.304	.	.	.	.	No
30	MC	3PL	1.580	-0.269	0.194	.	.	.	.	No
31	MC	3PL	0.809	1.432	0.229	.	.	.	.	No
32	MC	3PL	1.245	0.157	0.156	.	.	.	.	No
33	MC	3PL	1.551	0.646	0.341	.	.	.	.	No
34	MC	3PL	2.053	-0.670	0.258	.	.	.	.	No
35	MC	3PL	1.394	-0.398	0.103	.	.	.	.	No
36	MC	3PL	2.202	0.076	0.223	.	.	.	.	No
37	XI	3PL	1.109	0.068	0.195	.	.	.	.	No
38	XI	3PL	1.082	0.125	0.170	.	.	.	.	No
39	XI	3PL	0.992	0.734	0.127	.	.	.	.	No
40	XI	3PL	1.206	-2.646	0.380	.	.	.	.	No
41	XI	3PL	1.837	0.662	0.358	.	.	.	.	No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	XI	2PL	0.783	0.325	.	.	.	.	.	No
43	XI	3PL	1.100	1.358	0.286	.	.	.	.	No
44	XI	3PL	0.988	1.515	0.105	.	.	.	.	No
45	XI	3PL	1.431	0.069	0.066	.	.	.	.	No
46	XI	3PL	1.384	0.778	0.132	.	.	.	.	No
47	XI	3PL	0.448	0.696	0.183	.	.	.	.	No
48	XI	3PL	1.456	-0.305	0.085	.	.	.	.	No

Table 48. Grade 8 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.317	0.441	.	0.000	0.546	-0.546	.	No
2	CR	GPC	1.219	-0.554	.	0.000	1.027	-1.027	.	No
3	CR	GPC	0.910	0.877	.	0.000	0.789	-0.789	.	No
4	CR	GPC	0.544	0.619	.	0.000	-1.080	1.080	.	No
5	CR	GPC	0.688	0.222	.	0.000	-0.181	0.181	.	No
6	CR	GPC	1.138	0.990	.	0.000	1.171	-1.171	.	No
7	CR	GPC	1.073	-0.163	.	0.000	1.351	-1.351	.	Yes
8	CR	GPC	0.906	-0.881	.	0.000	0.260	-0.260	.	No
9	CR	GPC	1.358	-0.198	.	0.000	0.931	-0.931	.	No
10	CR	GPC	0.725	1.303	.	0.000	-1.023	1.023	.	No
11	CR	GPC	0.733	0.299	.	0.000	-0.667	0.667	.	Yes
12	CR	GPC	1.084	0.980	.	0.000	0.941	-0.941	.	No
13	CR	GPC	1.125	0.938	.	0.000	0.779	-0.779	.	Yes
14	CR	GPC	1.373	0.490	.	0.000	0.510	-0.510	.	No
15	CR	GPC	1.047	0.122	.	0.000	0.527	0.060	-0.588	No
16	CR	GPC	1.114	0.429	.	0.000	1.013	0.478	-1.491	No
17	CR	GPC	0.902	-0.095	.	0.000	0.488	-0.858	0.370	No
18	MC	3PL	1.470	0.932	0.331	.	.	.	.	No
19	MC	3PL	1.025	0.050	0.073	.	.	.	.	No
20	MC	3PL	0.547	-0.635	0.054	.	.	.	.	No
21	MC	3PL	1.301	-0.014	0.211	.	.	.	.	No
22	MC	3PL	0.943	-1.811	0.154	.	.	.	.	No
23	MC	3PL	0.984	0.501	0.293	.	.	.	.	No
24	MC	3PL	1.046	-1.244	0.011	.	.	.	.	No
25	MC	3PL	1.407	0.289	0.161	.	.	.	.	No
26	MC	3PL	2.122	0.974	0.327	.	.	.	.	No
27	MC	3PL	0.945	0.449	0.137	.	.	.	.	No
28	MC	3PL	2.147	1.326	0.398	.	.	.	.	No
29	MC	3PL	1.319	-0.255	0.241	.	.	.	.	No
30	MC	3PL	0.771	0.459	0.010	.	.	.	.	No
31	MC	3PL	0.973	1.259	0.263	.	.	.	.	No
32	MC	3PL	1.503	-0.230	0.237	.	.	.	.	No
33	MC	3PL	1.481	-0.170	0.081	.	.	.	.	No
34	MC	3PL	0.957	-0.360	0.175	.	.	.	.	No
35	MC	3PL	1.306	-1.585	0.202	.	.	.	.	No
36	MC	3PL	1.418	-0.909	0.186	.	.	.	.	No
37	MC	3PL	1.722	0.328	0.289	.	.	.	.	No
38	MC	3PL	1.371	0.695	0.218	.	.	.	.	No
39	MC	3PL	1.241	-0.164	0.310	.	.	.	.	No
40	MC	3PL	1.088	0.913	0.320	.	.	.	.	No
41	MC	3PL	0.802	0.967	0.077	.	.	.	.	No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	MC	3PL	0.884	-1.531	0.027	.	.	.	.	No
43	MC	3PL	1.384	-0.342	0.250	.	.	.	.	No
44	MC	3PL	1.799	0.199	0.281	.	.	.	.	No
45	XI	2PL	1.276	1.417	.	.	.	.	.	No
46	XI	2PL	0.687	-1.058	.	.	.	.	.	No
47	XI	2PL	1.276	0.639	.	.	.	.	.	No
48	XI	3PL	0.978	-2.151	0.071	.	.	.	.	No
49	XI	2PL	1.131	-0.141	.	.	.	.	.	No
50	XI	2PL	1.029	1.114	.	.	.	.	.	No
51	XI	2PL	0.949	1.129	.	.	.	.	.	No
52	XI	3PL	1.095	-0.549	0.183	.	.	.	.	No
53	XI	2PL	1.899	0.944	.	.	.	.	.	No
54	XI	2PL	0.882	-0.412	.	.	.	.	.	No
55	XI	2PL	0.914	0.767	.	.	.	.	.	No
56	XI	3PL	1.552	0.650	0.118	.	.	.	.	No
57	XI	2PL	1.753	1.847	.	.	.	.	.	No
58	XI	3PL	1.352	0.307	0.110	.	.	.	.	No
59	XI	3PL	0.950	-2.029	0.045	.	.	.	.	No

Table 49. Grade 4 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,383	2.19	1,383	2.19	345	24	0.04	2,175	3.44	390	37	0.06	3,397	5.37
301	14	0.02	1,397	2.21	346	24	0.04	2,199	3.48	391	29	0.05	3,426	5.42
302	17	0.03	1,414	2.24	347	20	0.03	2,219	3.51	392	37	0.06	3,463	5.48
303	18	0.03	1,432	2.26	348	28	0.04	2,247	3.55	393	38	0.06	3,501	5.54
304	11	0.02	1,443	2.28	349	21	0.03	2,268	3.59	394	34	0.05	3,535	5.59
305	19	0.03	1,462	2.31	350	29	0.05	2,297	3.63	395	49	0.08	3,584	5.67
306	8	0.01	1,470	2.32	351	24	0.04	2,321	3.67	396	42	0.07	3,626	5.73
307	15	0.02	1,485	2.35	352	17	0.03	2,338	3.70	397	33	0.05	3,659	5.79
308	21	0.03	1,506	2.38	353	21	0.03	2,359	3.73	398	31	0.05	3,690	5.83
309	17	0.03	1,523	2.41	354	22	0.03	2,381	3.76	399	46	0.07	3,736	5.91
310	14	0.02	1,537	2.43	355	25	0.04	2,406	3.80	400	48	0.08	3,784	5.98
311	18	0.03	1,555	2.46	356	22	0.03	2,428	3.84	401	51	0.08	3,835	6.06
312	13	0.02	1,568	2.48	357	30	0.05	2,458	3.89	402	56	0.09	3,891	6.15
313	15	0.02	1,583	2.50	358	22	0.03	2,480	3.92	403	41	0.06	3,932	6.22
314	15	0.02	1,598	2.53	359	23	0.04	2,503	3.96	404	41	0.06	3,973	6.28
315	16	0.03	1,614	2.55	360	16	0.03	2,519	3.98	405	48	0.08	4,021	6.36
316	9	0.01	1,623	2.57	361	23	0.04	2,542	4.02	406	32	0.05	4,053	6.41
317	14	0.02	1,637	2.59	362	28	0.04	2,570	4.06	407	48	0.08	4,101	6.48
318	22	0.03	1,659	2.62	363	30	0.05	2,600	4.11	408	66	0.10	4,167	6.59
319	15	0.02	1,674	2.65	364	26	0.04	2,626	4.15	409	40	0.06	4,207	6.65
320	14	0.02	1,688	2.67	365	23	0.04	2,649	4.19	410	41	0.06	4,248	6.72
321	19	0.03	1,707	2.70	366	29	0.05	2,678	4.23	411	56	0.09	4,304	6.81
322	11	0.02	1,718	2.72	367	13	0.02	2,691	4.25	412	49	0.08	4,353	6.88
323	19	0.03	1,737	2.75	368	24	0.04	2,715	4.29	413	42	0.07	4,395	6.95
324	19	0.03	1,756	2.78	369	28	0.04	2,743	4.34	414	45	0.07	4,440	7.02
325	27	0.04	1,783	2.82	370	28	0.04	2,771	4.38	415	43	0.07	4,483	7.09
326	19	0.03	1,802	2.85	371	32	0.05	2,803	4.43	416	61	0.10	4,544	7.18
327	26	0.04	1,828	2.89	372	25	0.04	2,828	4.47	417	55	0.09	4,599	7.27
328	16	0.03	1,844	2.92	373	30	0.05	2,858	4.52	418	40	0.06	4,639	7.33
329	16	0.03	1,860	2.94	374	28	0.04	2,886	4.56	419	57	0.09	4,696	7.42
330	20	0.03	1,880	2.97	375	33	0.05	2,919	4.62	420	50	0.08	4,746	7.50
331	22	0.03	1,902	3.01	376	23	0.04	2,942	4.65	421	58	0.09	4,804	7.60
332	25	0.04	1,927	3.05	377	31	0.05	2,973	4.70	422	57	0.09	4,861	7.69
333	20	0.03	1,947	3.08	378	27	0.04	3,000	4.74	423	52	0.08	4,913	7.77
334	17	0.03	1,964	3.11	379	28	0.04	3,028	4.79	424	55	0.09	4,968	7.86
335	15	0.02	1,979	3.13	380	26	0.04	3,054	4.83	425	43	0.07	5,011	7.92
336	23	0.04	2,002	3.17	381	29	0.05	3,083	4.87	426	44	0.07	5,055	7.99
337	19	0.03	2,021	3.20	382	35	0.06	3,118	4.93	427	58	0.09	5,113	8.08
338	24	0.04	2,045	3.23	383	32	0.05	3,150	4.98	428	65	0.10	5,178	8.19
339	17	0.03	2,062	3.26	384	30	0.05	3,180	5.03	429	42	0.07	5,220	8.25
340	19	0.03	2,081	3.29	385	36	0.06	3,216	5.08	430	53	0.08	5,273	8.34
341	23	0.04	2,104	3.33	386	30	0.05	3,246	5.13	431	62	0.10	5,335	8.44
342	14	0.02	2,118	3.35	387	47	0.07	3,293	5.21	432	49	0.08	5,384	8.51
343	18	0.03	2,136	3.38	388	40	0.06	3,333	5.27	433	54	0.09	5,438	8.60
344	15	0.02	2,151	3.40	389	27	0.04	3,360	5.31	434	53	0.08	5,491	8.68

Table 49. Grade 4 Cumulative Frequency Distribution of Scale Scores (continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	49	0.08	5,540	8.76	480	93	0.15	8,888	14.05	525	150	0.24	14,031	22.18
436	68	0.11	5,608	8.87	481	97	0.15	8,985	14.21	526	141	0.22	14,172	22.41
437	61	0.10	5,669	8.96	482	79	0.12	9,064	14.33	527	148	0.23	14,320	22.64
438	51	0.08	5,720	9.04	483	99	0.16	9,163	14.49	528	161	0.25	14,481	22.90
439	46	0.07	5,766	9.12	484	86	0.14	9,249	14.62	529	147	0.23	14,628	23.13
440	62	0.10	5,828	9.21	485	80	0.13	9,329	14.75	530	132	0.21	14,760	23.34
441	63	0.10	5,891	9.31	486	95	0.15	9,424	14.90	531	146	0.23	14,906	23.57
442	58	0.09	5,949	9.41	487	118	0.19	9,542	15.09	532	134	0.21	15,040	23.78
443	64	0.10	6,013	9.51	488	83	0.13	9,625	15.22	533	126	0.20	15,166	23.98
444	58	0.09	6,071	9.60	489	95	0.15	9,720	15.37	534	149	0.24	15,315	24.21
445	67	0.11	6,138	9.70	490	99	0.16	9,819	15.53	535	174	0.28	15,489	24.49
446	63	0.10	6,201	9.80	491	108	0.17	9,927	15.70	536	163	0.26	15,652	24.75
447	61	0.10	6,262	9.90	492	101	0.16	10,028	15.86	537	163	0.26	15,815	25.01
448	72	0.11	6,334	10.01	493	96	0.15	10,124	16.01	538	139	0.22	15,954	25.23
449	62	0.10	6,396	10.11	494	104	0.16	10,228	16.17	539	158	0.25	16,112	25.48
450	74	0.12	6,470	10.23	495	112	0.18	10,340	16.35	540	163	0.26	16,275	25.73
451	72	0.11	6,542	10.34	496	104	0.16	10,444	16.51	541	161	0.25	16,436	25.99
452	55	0.09	6,597	10.43	497	101	0.16	10,545	16.67	542	133	0.21	16,569	26.20
453	66	0.10	6,663	10.54	498	108	0.17	10,653	16.84	543	164	0.26	16,733	26.46
454	80	0.13	6,743	10.66	499	119	0.19	10,772	17.03	544	173	0.27	16,906	26.73
455	72	0.11	6,815	10.78	500	125	0.20	10,897	17.23	545	152	0.24	17,058	26.97
456	78	0.12	6,893	10.90	501	109	0.17	11,006	17.40	546	148	0.23	17,206	27.20
457	66	0.10	6,959	11.00	502	105	0.17	11,111	17.57	547	144	0.23	17,350	27.43
458	88	0.14	7,047	11.14	503	104	0.16	11,215	17.73	548	162	0.26	17,512	27.69
459	76	0.12	7,123	11.26	504	132	0.21	11,347	17.94	549	143	0.23	17,655	27.91
460	72	0.11	7,195	11.38	505	127	0.20	11,474	18.14	550	181	0.29	17,836	28.20
461	60	0.09	7,255	11.47	506	112	0.18	11,586	18.32	551	168	0.27	18,004	28.47
462	90	0.14	7,345	11.61	507	105	0.17	11,691	18.48	552	175	0.28	18,179	28.74
463	89	0.14	7,434	11.75	508	118	0.19	11,809	18.67	553	177	0.28	18,356	29.02
464	85	0.13	7,519	11.89	509	114	0.18	11,923	18.85	554	177	0.28	18,533	29.30
465	63	0.10	7,582	11.99	510	127	0.20	12,050	19.05	555	173	0.27	18,706	29.58
466	90	0.14	7,672	12.13	511	125	0.20	12,175	19.25	556	185	0.29	18,891	29.87
467	74	0.12	7,746	12.25	512	141	0.22	12,316	19.47	557	165	0.26	19,056	30.13
468	83	0.13	7,829	12.38	513	107	0.17	12,423	19.64	558	190	0.30	19,246	30.43
469	79	0.12	7,908	12.50	514	135	0.21	12,558	19.86	559	173	0.27	19,419	30.70
470	88	0.14	7,996	12.64	515	153	0.24	12,711	20.10	560	175	0.28	19,594	30.98
471	85	0.13	8,081	12.78	516	140	0.22	12,851	20.32	561	178	0.28	19,772	31.26
472	88	0.14	8,169	12.92	517	126	0.20	12,977	20.52	562	194	0.31	19,966	31.57
473	73	0.12	8,242	13.03	518	123	0.19	13,100	20.71	563	175	0.28	20,141	31.85
474	98	0.15	8,340	13.19	519	117	0.18	13,217	20.90	564	197	0.31	20,338	32.16
475	96	0.15	8,436	13.34	520	123	0.19	13,340	21.09	565	171	0.27	20,509	32.43
476	75	0.12	8,511	13.46	521	130	0.21	13,470	21.30	566	175	0.28	20,684	32.70
477	95	0.15	8,606	13.61	522	133	0.21	13,603	21.51	567	191	0.30	20,875	33.01
478	94	0.15	8,700	13.76	523	136	0.22	13,739	21.72	568	157	0.25	21,032	33.25
479	95	0.15	8,795	13.91	524	142	0.22	13,881	21.95	569	208	0.33	21,240	33.58

Table 49. Grade 4 Cumulative Frequency Distribution of Scale Scores (continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	180	0.28	21,420	33.87	615	222	0.35	30,957	48.95	660	228	0.36	41,437	65.52
571	189	0.30	21,609	34.17	616	238	0.38	31,195	49.32	661	242	0.38	41,679	65.90
572	212	0.34	21,821	34.50	617	259	0.41	31,454	49.73	662	225	0.36	41,904	66.26
573	214	0.34	22,035	34.84	618	228	0.36	31,682	50.09	663	250	0.40	42,154	66.65
574	194	0.31	22,229	35.15	619	208	0.33	31,890	50.42	664	206	0.33	42,360	66.98
575	179	0.28	22,408	35.43	620	221	0.35	32,111	50.77	665	234	0.37	42,594	67.35
576	190	0.30	22,598	35.73	621	251	0.40	32,362	51.17	666	236	0.37	42,830	67.72
577	200	0.32	22,798	36.05	622	242	0.38	32,604	51.55	667	210	0.33	43,040	68.05
578	203	0.32	23,001	36.37	623	262	0.41	32,866	51.97	668	197	0.31	43,237	68.36
579	230	0.36	23,231	36.73	624	212	0.34	33,078	52.30	669	241	0.38	43,478	68.74
580	194	0.31	23,425	37.04	625	222	0.35	33,300	52.65	670	218	0.34	43,696	69.09
581	206	0.33	23,631	37.36	626	234	0.37	33,534	53.02	671	212	0.34	43,908	69.42
582	191	0.30	23,822	37.67	627	186	0.29	33,720	53.32	672	208	0.33	44,116	69.75
583	193	0.31	24,015	37.97	628	245	0.39	33,965	53.70	673	222	0.35	44,338	70.10
584	205	0.32	24,220	38.29	629	213	0.34	34,178	54.04	674	209	0.33	44,547	70.43
585	201	0.32	24,421	38.61	630	215	0.34	34,393	54.38	675	191	0.30	44,738	70.74
586	212	0.34	24,633	38.95	631	224	0.35	34,617	54.73	676	218	0.34	44,956	71.08
587	206	0.33	24,839	39.27	632	250	0.40	34,867	55.13	677	238	0.38	45,194	71.46
588	196	0.31	25,035	39.58	633	237	0.37	35,104	55.50	678	210	0.33	45,404	71.79
589	196	0.31	25,231	39.89	634	252	0.40	35,356	55.90	679	223	0.35	45,627	72.14
590	208	0.33	25,439	40.22	635	226	0.36	35,582	56.26	680	198	0.31	45,825	72.46
591	211	0.33	25,650	40.56	636	225	0.36	35,807	56.62	681	213	0.34	46,038	72.79
592	221	0.35	25,871	40.91	637	235	0.37	36,042	56.99	682	203	0.32	46,241	73.11
593	196	0.31	26,067	41.22	638	262	0.41	36,304	57.40	683	216	0.34	46,457	73.45
594	195	0.31	26,262	41.52	639	232	0.37	36,536	57.77	684	212	0.34	46,669	73.79
595	223	0.35	26,485	41.88	640	220	0.35	36,756	58.12	685	205	0.32	46,874	74.11
596	216	0.34	26,701	42.22	641	233	0.37	36,989	58.48	686	197	0.31	47,071	74.43
597	228	0.36	26,929	42.58	642	256	0.40	37,245	58.89	687	203	0.32	47,274	74.75
598	206	0.33	27,135	42.90	643	236	0.37	37,481	59.26	688	208	0.33	47,482	75.08
599	210	0.33	27,345	43.24	644	245	0.39	37,726	59.65	689	188	0.30	47,670	75.37
600	222	0.35	27,567	43.59	645	227	0.36	37,953	60.01	690	200	0.32	47,870	75.69
601	236	0.37	27,803	43.96	646	210	0.33	38,163	60.34	691	238	0.38	48,108	76.06
602	228	0.36	28,031	44.32	647	224	0.35	38,387	60.69	692	193	0.31	48,301	76.37
603	211	0.33	28,242	44.65	648	230	0.36	38,617	61.06	693	203	0.32	48,504	76.69
604	190	0.30	28,432	44.95	649	268	0.42	38,885	61.48	694	182	0.29	48,686	76.98
605	253	0.40	28,685	45.35	650	213	0.34	39,098	61.82	695	190	0.30	48,876	77.28
606	236	0.37	28,921	45.73	651	229	0.36	39,327	62.18	696	214	0.34	49,090	77.62
607	251	0.40	29,172	46.12	652	255	0.40	39,582	62.58	697	184	0.29	49,274	77.91
608	241	0.38	29,413	46.51	653	235	0.37	39,817	62.96	698	182	0.29	49,456	78.20
609	191	0.30	29,604	46.81	654	232	0.37	40,049	63.32	699	195	0.31	49,651	78.50
610	250	0.40	29,854	47.20	655	249	0.39	40,298	63.72	700	179	0.28	49,830	78.79
611	191	0.30	30,045	47.50	656	236	0.37	40,534	64.09	701	180	0.28	50,010	79.07
612	225	0.36	30,270	47.86	657	239	0.38	40,773	64.47	702	188	0.30	50,198	79.37
613	246	0.39	30,516	48.25	658	225	0.36	40,998	64.82	703	185	0.29	50,383	79.66
614	219	0.35	30,735	48.60	659	211	0.33	41,209	65.16	704	185	0.29	50,568	79.95

Table 49. Grade 4 Cumulative Frequency Distribution of Scale Scores (continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	183	0.29	50,751	80.24	750	127	0.20	57,491	90.90	795	57	0.09	61,126	96.65
706	185	0.29	50,936	80.54	751	117	0.18	57,608	91.09	796	44	0.07	61,170	96.72
707	178	0.28	51,114	80.82	752	93	0.15	57,701	91.23	797	53	0.08	61,223	96.80
708	181	0.29	51,295	81.10	753	104	0.16	57,805	91.40	798	54	0.09	61,277	96.89
709	160	0.25	51,455	81.36	754	116	0.18	57,921	91.58	799	42	0.07	61,319	96.95
710	190	0.30	51,645	81.66	755	102	0.16	58,023	91.74	800	39	0.06	61,358	97.01
711	172	0.27	51,817	81.93	756	108	0.17	58,131	91.91	801	44	0.07	61,402	97.08
712	177	0.28	51,994	82.21	757	112	0.18	58,243	92.09	802	55	0.09	61,457	97.17
713	152	0.24	52,146	82.45	758	91	0.14	58,334	92.23	803	49	0.08	61,506	97.25
714	153	0.24	52,299	82.69	759	96	0.15	58,430	92.39	804	47	0.07	61,553	97.32
715	160	0.25	52,459	82.94	760	96	0.15	58,526	92.54	805	53	0.08	61,606	97.41
716	171	0.27	52,630	83.21	761	83	0.13	58,609	92.67	806	41	0.06	61,647	97.47
717	154	0.24	52,784	83.46	762	109	0.17	58,718	92.84	807	39	0.06	61,686	97.53
718	180	0.28	52,964	83.74	763	93	0.15	58,811	92.99	808	48	0.08	61,734	97.61
719	162	0.26	53,126	84.00	764	93	0.15	58,904	93.13	809	41	0.06	61,775	97.67
720	167	0.26	53,293	84.26	765	95	0.15	58,999	93.28	810	40	0.06	61,815	97.74
721	155	0.25	53,448	84.51	766	81	0.13	59,080	93.41	811	38	0.06	61,853	97.80
722	164	0.26	53,612	84.77	767	80	0.13	59,160	93.54	812	40	0.06	61,893	97.86
723	151	0.24	53,763	85.01	768	98	0.15	59,258	93.69	813	36	0.06	61,929	97.92
724	180	0.28	53,943	85.29	769	94	0.15	59,352	93.84	814	41	0.06	61,970	97.98
725	160	0.25	54,103	85.54	770	72	0.11	59,424	93.96	815	38	0.06	62,008	98.04
726	157	0.25	54,260	85.79	771	90	0.14	59,514	94.10	816	30	0.05	62,038	98.09
727	137	0.22	54,397	86.01	772	83	0.13	59,597	94.23	817	57	0.09	62,095	98.18
728	155	0.25	54,552	86.25	773	68	0.11	59,665	94.34	818	29	0.05	62,124	98.23
729	171	0.27	54,723	86.52	774	86	0.14	59,751	94.47	819	28	0.04	62,152	98.27
730	134	0.21	54,857	86.74	775	67	0.11	59,818	94.58	820	26	0.04	62,178	98.31
731	147	0.23	55,004	86.97	776	81	0.13	59,899	94.71	821	23	0.04	62,201	98.35
732	149	0.24	55,153	87.20	777	88	0.14	59,987	94.85	822	40	0.06	62,241	98.41
733	153	0.24	55,306	87.45	778	84	0.13	60,071	94.98	823	30	0.05	62,271	98.46
734	146	0.23	55,452	87.68	779	62	0.10	60,133	95.08	824	29	0.05	62,300	98.50
735	140	0.22	55,592	87.90	780	67	0.11	60,200	95.18	825	22	0.03	62,322	98.54
736	137	0.22	55,729	88.11	781	87	0.14	60,287	95.32	826	31	0.05	62,353	98.59
737	127	0.20	55,856	88.32	782	62	0.10	60,349	95.42	827	21	0.03	62,374	98.62
738	136	0.22	55,992	88.53	783	65	0.10	60,414	95.52	828	22	0.03	62,396	98.66
739	141	0.22	56,133	88.75	784	62	0.10	60,476	95.62	829	23	0.04	62,419	98.69
740	134	0.21	56,267	88.97	785	76	0.12	60,552	95.74	830	23	0.04	62,442	98.73
741	111	0.18	56,378	89.14	786	56	0.09	60,608	95.83	831	23	0.04	62,465	98.77
742	111	0.18	56,489	89.32	787	59	0.09	60,667	95.92	832	33	0.05	62,498	98.82
743	139	0.22	56,628	89.54	788	57	0.09	60,724	96.01	833	26	0.04	62,524	98.86
744	115	0.18	56,743	89.72	789	56	0.09	60,780	96.10	834	23	0.04	62,547	98.89
745	111	0.18	56,854	89.89	790	44	0.07	60,824	96.17	835	27	0.04	62,574	98.94
746	134	0.21	56,988	90.11	791	75	0.12	60,899	96.29	836	16	0.03	62,590	98.96
747	125	0.20	57,113	90.30	792	53	0.08	60,952	96.37	837	23	0.04	62,613	99.00
748	120	0.19	57,233	90.49	793	64	0.10	61,016	96.47	838	21	0.03	62,634	99.03
749	131	0.21	57,364	90.70	794	53	0.08	61,069	96.56	839	10	0.02	62,644	99.05

Table 49. Grade 4 Cumulative Frequency Distribution of Scale Scores (continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	23	0.04	62,667	99.08	886	3	0.00	63,119	99.80
841	19	0.03	62,686	99.11	887	4	0.01	63,123	99.81
842	19	0.03	62,705	99.14	888	5	0.01	63,128	99.81
843	23	0.04	62,728	99.18	889	2	0.00	63,130	99.82
844	16	0.03	62,744	99.21	890	5	0.01	63,135	99.82
845	19	0.03	62,763	99.24	891	2	0.00	63,137	99.83
846	9	0.01	62,772	99.25	892	3	0.00	63,140	99.83
847	17	0.03	62,789	99.28	893	4	0.01	63,144	99.84
848	15	0.02	62,804	99.30	894	3	0.00	63,147	99.84
849	13	0.02	62,817	99.32	895	7	0.01	63,154	99.85
850	11	0.02	62,828	99.34	896	3	0.00	63,157	99.86
851	13	0.02	62,841	99.36	897	3	0.00	63,160	99.86
852	13	0.02	62,854	99.38	898	1	0.00	63,161	99.87
853	15	0.02	62,869	99.40	899	3	0.00	63,164	99.87
854	17	0.03	62,886	99.43	900	82	0.13	63,246	100.00
855	11	0.02	62,897	99.45					
856	10	0.02	62,907	99.46					
857	14	0.02	62,921	99.49					
858	14	0.02	62,935	99.51					
859	13	0.02	62,948	99.53					
860	8	0.01	62,956	99.54					
861	9	0.01	62,965	99.56					
862	6	0.01	62,971	99.57					
863	8	0.01	62,979	99.58					
864	12	0.02	62,991	99.60					
865	9	0.01	63,000	99.61					
866	13	0.02	63,013	99.63					
867	12	0.02	63,025	99.65					
868	9	0.01	63,034	99.66					
869	12	0.02	63,046	99.68					
870	5	0.01	63,051	99.69					
871	7	0.01	63,058	99.70					
872	7	0.01	63,065	99.71					
873	1	0.00	63,066	99.72					
874	8	0.01	63,074	99.73					
875	7	0.01	63,081	99.74					
876	3	0.00	63,084	99.74					
877	2	0.00	63,086	99.75					
878	3	0.00	63,089	99.75					
879	2	0.00	63,091	99.75					
880	4	0.01	63,095	99.76					
882	7	0.01	63,102	99.77					
883	5	0.01	63,107	99.78					
884	4	0.01	63,111	99.79					
885	5	0.01	63,116	99.79					

Table 50. Grade 5 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	839	1.33	839	1.33	345	21	0.03	1,470	2.34	390	29	0.05	2,630	4.18
301	4	0.01	843	1.34	346	14	0.02	1,484	2.36	391	41	0.07	2,671	4.25
302	14	0.02	857	1.36	347	15	0.02	1,499	2.38	392	39	0.06	2,710	4.31
303	10	0.02	867	1.38	348	23	0.04	1,522	2.42	393	43	0.07	2,753	4.38
304	10	0.02	877	1.40	349	23	0.04	1,545	2.46	394	35	0.06	2,788	4.44
305	12	0.02	889	1.41	350	17	0.03	1,562	2.49	395	29	0.05	2,817	4.48
306	9	0.01	898	1.43	351	15	0.02	1,577	2.51	396	43	0.07	2,860	4.55
307	12	0.02	910	1.45	352	23	0.04	1,600	2.55	397	46	0.07	2,906	4.62
308	12	0.02	922	1.47	353	14	0.02	1,614	2.57	398	39	0.06	2,945	4.69
309	9	0.01	931	1.48	354	28	0.04	1,642	2.61	399	46	0.07	2,991	4.76
310	7	0.01	938	1.49	355	24	0.04	1,666	2.65	400	53	0.08	3,044	4.84
311	13	0.02	951	1.51	356	31	0.05	1,697	2.70	401	34	0.05	3,078	4.90
312	13	0.02	964	1.53	357	25	0.04	1,722	2.74	402	41	0.07	3,119	4.96
313	13	0.02	977	1.55	358	20	0.03	1,742	2.77	403	46	0.07	3,165	5.04
314	12	0.02	989	1.57	359	16	0.03	1,758	2.80	404	41	0.07	3,206	5.10
315	8	0.01	997	1.59	360	28	0.04	1,786	2.84	405	42	0.07	3,248	5.17
316	18	0.03	1,015	1.61	361	14	0.02	1,800	2.86	406	36	0.06	3,284	5.22
317	11	0.02	1,026	1.63	362	22	0.04	1,822	2.90	407	37	0.06	3,321	5.28
318	9	0.01	1,035	1.65	363	21	0.03	1,843	2.93	408	43	0.07	3,364	5.35
319	8	0.01	1,043	1.66	364	25	0.04	1,868	2.97	409	51	0.08	3,415	5.43
320	10	0.02	1,053	1.68	365	26	0.04	1,894	3.01	410	52	0.08	3,467	5.52
321	12	0.02	1,065	1.69	366	25	0.04	1,919	3.05	411	55	0.09	3,522	5.60
322	10	0.02	1,075	1.71	367	11	0.02	1,930	3.07	412	53	0.08	3,575	5.69
323	13	0.02	1,088	1.73	368	16	0.03	1,946	3.10	413	54	0.09	3,629	5.77
324	19	0.03	1,107	1.76	369	27	0.04	1,973	3.14	414	40	0.06	3,669	5.84
325	20	0.03	1,127	1.79	370	28	0.04	2,001	3.18	415	55	0.09	3,724	5.92
326	9	0.01	1,136	1.81	371	30	0.05	2,031	3.23	416	53	0.08	3,777	6.01
327	19	0.03	1,155	1.84	372	29	0.05	2,060	3.28	417	55	0.09	3,832	6.10
328	13	0.02	1,168	1.86	373	27	0.04	2,087	3.32	418	43	0.07	3,875	6.16
329	18	0.03	1,186	1.89	374	28	0.04	2,115	3.36	419	62	0.10	3,937	6.26
330	13	0.02	1,199	1.91	375	34	0.05	2,149	3.42	420	58	0.09	3,995	6.36
331	22	0.04	1,221	1.94	376	27	0.04	2,176	3.46	421	63	0.10	4,058	6.46
332	12	0.02	1,233	1.96	377	29	0.05	2,205	3.51	422	59	0.09	4,117	6.55
333	14	0.02	1,247	1.98	378	39	0.06	2,244	3.57	423	67	0.11	4,184	6.66
334	27	0.04	1,274	2.03	379	28	0.04	2,272	3.61	424	62	0.10	4,246	6.76
335	19	0.03	1,293	2.06	380	27	0.04	2,299	3.66	425	56	0.09	4,302	6.84
336	15	0.02	1,308	2.08	381	37	0.06	2,336	3.72	426	65	0.10	4,367	6.95
337	9	0.01	1,317	2.10	382	30	0.05	2,366	3.76	427	68	0.11	4,435	7.06
338	19	0.03	1,336	2.13	383	29	0.05	2,395	3.81	428	68	0.11	4,503	7.16
339	18	0.03	1,354	2.15	384	36	0.06	2,431	3.87	429	50	0.08	4,553	7.24
340	26	0.04	1,380	2.20	385	35	0.06	2,466	3.92	430	69	0.11	4,622	7.35
341	19	0.03	1,399	2.23	386	35	0.06	2,501	3.98	431	69	0.11	4,691	7.46
342	20	0.03	1,419	2.26	387	30	0.05	2,531	4.03	432	66	0.11	4,757	7.57
343	14	0.02	1,433	2.28	388	26	0.04	2,557	4.07	433	67	0.11	4,824	7.67
344	16	0.03	1,449	2.31	389	44	0.07	2,601	4.14	434	56	0.09	4,880	7.76

Table 50. Grade 5 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	69	0.11	4,949	7.87	480	107	0.17	8,880	14.13	525	146	0.23	14,860	23.64
436	68	0.11	5,017	7.98	481	118	0.19	8,998	14.32	526	139	0.22	14,999	23.86
437	62	0.10	5,079	8.08	482	124	0.20	9,122	14.51	527	184	0.29	15,183	24.15
438	80	0.13	5,159	8.21	483	114	0.18	9,236	14.69	528	156	0.25	15,339	24.40
439	63	0.10	5,222	8.31	484	96	0.15	9,332	14.85	529	156	0.25	15,495	24.65
440	79	0.13	5,301	8.43	485	117	0.19	9,449	15.03	530	180	0.29	15,675	24.94
441	71	0.11	5,372	8.55	486	102	0.16	9,551	15.19	531	183	0.29	15,858	25.23
442	68	0.11	5,440	8.65	487	119	0.19	9,670	15.38	532	178	0.28	16,036	25.51
443	67	0.11	5,507	8.76	488	116	0.18	9,786	15.57	533	183	0.29	16,219	25.80
444	88	0.14	5,595	8.90	489	123	0.20	9,909	15.76	534	170	0.27	16,389	26.07
445	76	0.12	5,671	9.02	490	117	0.19	10,026	15.95	535	149	0.24	16,538	26.31
446	68	0.11	5,739	9.13	491	119	0.19	10,145	16.14	536	156	0.25	16,694	26.56
447	87	0.14	5,826	9.27	492	121	0.19	10,266	16.33	537	173	0.28	16,867	26.83
448	84	0.13	5,910	9.40	493	113	0.18	10,379	16.51	538	173	0.28	17,040	27.11
449	88	0.14	5,998	9.54	494	135	0.21	10,514	16.73	539	173	0.28	17,213	27.38
450	92	0.15	6,090	9.69	495	127	0.20	10,641	16.93	540	175	0.28	17,388	27.66
451	80	0.13	6,170	9.82	496	117	0.19	10,758	17.12	541	197	0.31	17,585	27.98
452	81	0.13	6,251	9.94	497	132	0.21	10,890	17.33	542	188	0.30	17,773	28.28
453	88	0.14	6,339	10.08	498	130	0.21	11,020	17.53	543	177	0.28	17,950	28.56
454	71	0.11	6,410	10.20	499	128	0.20	11,148	17.74	544	166	0.26	18,116	28.82
455	76	0.12	6,486	10.32	500	142	0.23	11,290	17.96	545	177	0.28	18,293	29.10
456	74	0.12	6,560	10.44	501	128	0.20	11,418	18.17	546	187	0.30	18,480	29.40
457	98	0.16	6,658	10.59	502	144	0.23	11,562	18.39	547	188	0.30	18,668	29.70
458	84	0.13	6,742	10.73	503	124	0.20	11,686	18.59	548	194	0.31	18,862	30.01
459	92	0.15	6,834	10.87	504	117	0.19	11,803	18.78	549	184	0.29	19,046	30.30
460	82	0.13	6,916	11.00	505	151	0.24	11,954	19.02	550	205	0.33	19,251	30.63
461	79	0.13	6,995	11.13	506	109	0.17	12,063	19.19	551	173	0.28	19,424	30.90
462	86	0.14	7,081	11.27	507	140	0.22	12,203	19.41	552	191	0.30	19,615	31.21
463	91	0.14	7,172	11.41	508	132	0.21	12,335	19.62	553	203	0.32	19,818	31.53
464	92	0.15	7,264	11.56	509	151	0.24	12,486	19.86	554	212	0.34	20,030	31.87
465	102	0.16	7,366	11.72	510	163	0.26	12,649	20.12	555	202	0.32	20,232	32.19
466	90	0.14	7,456	11.86	511	137	0.22	12,786	20.34	556	185	0.29	20,417	32.48
467	95	0.15	7,551	12.01	512	140	0.22	12,926	20.56	557	172	0.27	20,589	32.76
468	95	0.15	7,646	12.16	513	141	0.22	13,067	20.79	558	193	0.31	20,782	33.06
469	97	0.15	7,743	12.32	514	135	0.21	13,202	21.00	559	212	0.34	20,994	33.40
470	96	0.15	7,839	12.47	515	135	0.21	13,337	21.22	560	205	0.33	21,199	33.73
471	95	0.15	7,934	12.62	516	141	0.22	13,478	21.44	561	184	0.29	21,383	34.02
472	93	0.15	8,027	12.77	517	145	0.23	13,623	21.67	562	218	0.35	21,601	34.37
473	108	0.17	8,135	12.94	518	142	0.23	13,765	21.90	563	205	0.33	21,806	34.69
474	113	0.18	8,248	13.12	519	155	0.25	13,920	22.15	564	189	0.30	21,995	34.99
475	126	0.20	8,374	13.32	520	165	0.26	14,085	22.41	565	188	0.30	22,183	35.29
476	106	0.17	8,480	13.49	521	145	0.23	14,230	22.64	566	201	0.32	22,384	35.61
477	102	0.16	8,582	13.65	522	161	0.26	14,391	22.89	567	198	0.32	22,582	35.93
478	77	0.12	8,659	13.78	523	168	0.27	14,559	23.16	568	234	0.37	22,816	36.30
479	114	0.18	8,773	13.96	524	155	0.25	14,714	23.41	569	195	0.31	23,011	36.61

Table 50. Grade 5 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	186	0.30	23,197	36.90	615	242	0.39	33,046	52.57	660	235	0.37	43,430	69.09
571	231	0.37	23,428	37.27	616	240	0.38	33,286	52.96	661	209	0.33	43,639	69.43
572	197	0.31	23,625	37.59	617	239	0.38	33,525	53.34	662	225	0.36	43,864	69.78
573	217	0.35	23,842	37.93	618	242	0.39	33,767	53.72	663	253	0.40	44,117	70.19
574	198	0.32	24,040	38.25	619	210	0.33	33,977	54.05	664	221	0.35	44,338	70.54
575	219	0.35	24,259	38.59	620	248	0.39	34,225	54.45	665	194	0.31	44,532	70.85
576	204	0.32	24,463	38.92	621	241	0.38	34,466	54.83	666	230	0.37	44,762	71.21
577	208	0.33	24,671	39.25	622	266	0.42	34,732	55.26	667	206	0.33	44,968	71.54
578	192	0.31	24,863	39.55	623	228	0.36	34,960	55.62	668	212	0.34	45,180	71.88
579	188	0.30	25,051	39.85	624	241	0.38	35,201	56.00	669	221	0.35	45,401	72.23
580	209	0.33	25,260	40.19	625	243	0.39	35,444	56.39	670	226	0.36	45,627	72.59
581	214	0.34	25,474	40.53	626	254	0.40	35,698	56.79	671	206	0.33	45,833	72.92
582	220	0.35	25,694	40.88	627	228	0.36	35,926	57.16	672	233	0.37	46,066	73.29
583	221	0.35	25,915	41.23	628	223	0.35	36,149	57.51	673	239	0.38	46,305	73.67
584	257	0.41	26,172	41.64	629	234	0.37	36,383	57.88	674	214	0.34	46,519	74.01
585	240	0.38	26,412	42.02	630	197	0.31	36,580	58.20	675	213	0.34	46,732	74.35
586	202	0.32	26,614	42.34	631	241	0.38	36,821	58.58	676	207	0.33	46,939	74.68
587	212	0.34	26,826	42.68	632	227	0.36	37,048	58.94	677	213	0.34	47,152	75.01
588	209	0.33	27,035	43.01	633	234	0.37	37,282	59.31	678	209	0.33	47,361	75.35
589	190	0.30	27,225	43.31	634	230	0.37	37,512	59.68	679	209	0.33	47,570	75.68
590	210	0.33	27,435	43.65	635	239	0.38	37,751	60.06	680	180	0.29	47,750	75.97
591	213	0.34	27,648	43.99	636	218	0.35	37,969	60.41	681	205	0.33	47,955	76.29
592	210	0.33	27,858	44.32	637	240	0.38	38,209	60.79	682	195	0.31	48,150	76.60
593	228	0.36	28,086	44.68	638	232	0.37	38,441	61.16	683	183	0.29	48,333	76.89
594	234	0.37	28,320	45.05	639	243	0.39	38,684	61.54	684	188	0.30	48,521	77.19
595	218	0.35	28,538	45.40	640	218	0.35	38,902	61.89	685	207	0.33	48,728	77.52
596	214	0.34	28,752	45.74	641	224	0.36	39,126	62.25	686	203	0.32	48,931	77.84
597	219	0.35	28,971	46.09	642	232	0.37	39,358	62.62	687	202	0.32	49,133	78.17
598	199	0.32	29,170	46.41	643	239	0.38	39,597	63.00	688	207	0.33	49,340	78.50
599	210	0.33	29,380	46.74	644	227	0.36	39,824	63.36	689	202	0.32	49,542	78.82
600	222	0.35	29,602	47.09	645	234	0.37	40,058	63.73	690	189	0.30	49,731	79.12
601	223	0.35	29,825	47.45	646	219	0.35	40,277	64.08	691	198	0.32	49,929	79.43
602	231	0.37	30,056	47.82	647	227	0.36	40,504	64.44	692	196	0.31	50,125	79.74
603	220	0.35	30,276	48.17	648	234	0.37	40,738	64.81	693	207	0.33	50,332	80.07
604	226	0.36	30,502	48.53	649	242	0.39	40,980	65.20	694	212	0.34	50,544	80.41
605	219	0.35	30,721	48.87	650	223	0.35	41,203	65.55	695	183	0.29	50,727	80.70
606	211	0.34	30,932	49.21	651	239	0.38	41,442	65.93	696	156	0.25	50,883	80.95
607	231	0.37	31,163	49.58	652	247	0.39	41,689	66.32	697	177	0.28	51,060	81.23
608	239	0.38	31,402	49.96	653	212	0.34	41,901	66.66	698	180	0.29	51,240	81.52
609	241	0.38	31,643	50.34	654	206	0.33	42,107	66.99	699	147	0.23	51,387	81.75
610	241	0.38	31,884	50.72	655	237	0.38	42,344	67.37	700	180	0.29	51,567	82.04
611	232	0.37	32,116	51.09	656	198	0.32	42,542	67.68	701	153	0.24	51,720	82.28
612	245	0.39	32,361	51.48	657	242	0.39	42,784	68.07	702	219	0.35	51,939	82.63
613	232	0.37	32,593	51.85	658	194	0.31	42,978	68.37	703	180	0.29	52,119	82.92
614	211	0.34	32,804	52.19	659	217	0.35	43,195	68.72	704	187	0.30	52,306	83.21

Table 50. Grade 5 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	182	0.29	52,488	83.50	750	89	0.14	58,529	93.11	795	56	0.09	61,528	97.89
706	183	0.29	52,671	83.79	751	82	0.13	58,611	93.24	796	33	0.05	61,561	97.94
707	164	0.26	52,835	84.06	752	86	0.14	58,697	93.38	797	34	0.05	61,595	97.99
708	175	0.28	53,010	84.33	753	99	0.16	58,796	93.54	798	38	0.06	61,633	98.05
709	177	0.28	53,187	84.62	754	98	0.16	58,894	93.70	799	27	0.04	61,660	98.10
710	166	0.26	53,353	84.88	755	92	0.15	58,986	93.84	800	39	0.06	61,699	98.16
711	165	0.26	53,518	85.14	756	78	0.12	59,064	93.97	801	27	0.04	61,726	98.20
712	197	0.31	53,715	85.46	757	89	0.14	59,153	94.11	802	30	0.05	61,756	98.25
713	161	0.26	53,876	85.71	758	87	0.14	59,240	94.25	803	37	0.06	61,793	98.31
714	135	0.21	54,011	85.93	759	80	0.13	59,320	94.37	804	41	0.07	61,834	98.37
715	129	0.21	54,140	86.13	760	78	0.12	59,398	94.50	805	33	0.05	61,867	98.42
716	143	0.23	54,283	86.36	761	83	0.13	59,481	94.63	806	35	0.06	61,902	98.48
717	151	0.24	54,434	86.60	762	70	0.11	59,551	94.74	807	32	0.05	61,934	98.53
718	149	0.24	54,583	86.84	763	71	0.11	59,622	94.85	808	28	0.04	61,962	98.58
719	146	0.23	54,729	87.07	764	60	0.10	59,682	94.95	809	28	0.04	61,990	98.62
720	145	0.23	54,874	87.30	765	72	0.11	59,754	95.06	810	24	0.04	62,014	98.66
721	143	0.23	55,017	87.53	766	67	0.11	59,821	95.17	811	27	0.04	62,041	98.70
722	150	0.24	55,167	87.77	767	86	0.14	59,907	95.31	812	23	0.04	62,064	98.74
723	144	0.23	55,311	87.99	768	76	0.12	59,983	95.43	813	24	0.04	62,088	98.78
724	130	0.21	55,441	88.20	769	59	0.09	60,042	95.52	814	18	0.03	62,106	98.81
725	146	0.23	55,587	88.43	770	75	0.12	60,117	95.64	815	34	0.05	62,140	98.86
726	136	0.22	55,723	88.65	771	72	0.11	60,189	95.76	816	22	0.04	62,162	98.89
727	129	0.21	55,852	88.86	772	63	0.10	60,252	95.86	817	24	0.04	62,186	98.93
728	145	0.23	55,997	89.09	773	75	0.12	60,327	95.97	818	19	0.03	62,205	98.96
729	129	0.21	56,126	89.29	774	54	0.09	60,381	96.06	819	25	0.04	62,230	99.00
730	127	0.20	56,253	89.49	775	65	0.10	60,446	96.16	820	16	0.03	62,246	99.03
731	146	0.23	56,399	89.73	776	64	0.10	60,510	96.27	821	23	0.04	62,269	99.06
732	126	0.20	56,525	89.93	777	45	0.07	60,555	96.34	822	21	0.03	62,290	99.10
733	122	0.19	56,647	90.12	778	67	0.11	60,622	96.44	823	20	0.03	62,310	99.13
734	135	0.21	56,782	90.34	779	71	0.11	60,693	96.56	824	15	0.02	62,325	99.15
735	130	0.21	56,912	90.54	780	53	0.08	60,746	96.64	825	28	0.04	62,353	99.20
736	112	0.18	57,024	90.72	781	58	0.09	60,804	96.73	826	19	0.03	62,372	99.23
737	134	0.21	57,158	90.93	782	57	0.09	60,861	96.82	827	20	0.03	62,392	99.26
738	106	0.17	57,264	91.10	783	57	0.09	60,918	96.92	828	14	0.02	62,406	99.28
739	94	0.15	57,358	91.25	784	70	0.11	60,988	97.03	829	17	0.03	62,423	99.31
740	115	0.18	57,473	91.43	785	59	0.09	61,047	97.12	830	15	0.02	62,438	99.33
741	111	0.18	57,584	91.61	786	50	0.08	61,097	97.20	831	12	0.02	62,450	99.35
742	113	0.18	57,697	91.79	787	64	0.10	61,161	97.30	832	9	0.01	62,459	99.37
743	105	0.17	57,802	91.96	788	43	0.07	61,204	97.37	833	12	0.02	62,471	99.39
744	114	0.18	57,916	92.14	789	48	0.08	61,252	97.45	834	19	0.03	62,490	99.42
745	117	0.19	58,033	92.33	790	35	0.06	61,287	97.50	835	12	0.02	62,502	99.44
746	102	0.16	58,135	92.49	791	47	0.07	61,334	97.58	836	9	0.01	62,511	99.45
747	96	0.15	58,231	92.64	792	39	0.06	61,373	97.64	837	15	0.02	62,526	99.47
748	92	0.15	58,323	92.79	793	54	0.09	61,427	97.72	838	8	0.01	62,534	99.49
749	117	0.19	58,440	92.97	794	45	0.07	61,472	97.80	839	13	0.02	62,547	99.51

Table 50. Grade 5 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	2	0.00	62,549	99.51	886	4	0.01	62,804	99.92
841	15	0.02	62,564	99.53	887	1	0.00	62,805	99.92
842	9	0.01	62,573	99.55	888	2	0.00	62,807	99.92
843	11	0.02	62,584	99.57	889	2	0.00	62,809	99.92
844	10	0.02	62,594	99.58	891	3	0.00	62,812	99.93
845	9	0.01	62,603	99.60	892	3	0.00	62,815	99.93
846	10	0.02	62,613	99.61	893	3	0.00	62,818	99.94
847	15	0.02	62,628	99.64	894	2	0.00	62,820	99.94
848	5	0.01	62,633	99.64	896	2	0.00	62,822	99.94
849	11	0.02	62,644	99.66	897	2	0.00	62,824	99.95
850	6	0.01	62,650	99.67	900	33	0.05	62,857	100.00
851	11	0.02	62,661	99.69					
852	8	0.01	62,669	99.70					
853	8	0.01	62,677	99.71					
854	2	0.00	62,679	99.72					
855	6	0.01	62,685	99.73					
856	4	0.01	62,689	99.73					
857	5	0.01	62,694	99.74					
858	5	0.01	62,699	99.75					
859	4	0.01	62,703	99.75					
860	4	0.01	62,707	99.76					
861	3	0.00	62,710	99.77					
862	3	0.00	62,713	99.77					
863	10	0.02	62,723	99.79					
864	5	0.01	62,728	99.79					
865	9	0.01	62,737	99.81					
866	2	0.00	62,739	99.81					
867	4	0.01	62,743	99.82					
868	6	0.01	62,749	99.83					
869	3	0.00	62,752	99.83					
870	5	0.01	62,757	99.84					
871	7	0.01	62,764	99.85					
872	4	0.01	62,768	99.86					
873	3	0.00	62,771	99.86					
874	4	0.01	62,775	99.87					
875	3	0.00	62,778	99.87					
876	3	0.00	62,781	99.88					
877	5	0.01	62,786	99.89					
878	1	0.00	62,787	99.89					
879	1	0.00	62,788	99.89					
880	2	0.00	62,790	99.89					
881	5	0.01	62,795	99.90					
882	2	0.00	62,797	99.90					
884	1	0.00	62,798	99.91					
885	2	0.00	62,800	99.91					

Table 51. Grade 7 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,074	1.80	1,074	1.80	345	17	0.03	1,653	2.77	390	31	0.05	2,654	4.44
301	14	0.02	1,088	1.82	346	20	0.03	1,673	2.80	391	30	0.05	2,684	4.49
302	10	0.02	1,098	1.84	347	12	0.02	1,685	2.82	392	29	0.05	2,713	4.54
303	12	0.02	1,110	1.86	348	22	0.04	1,707	2.86	393	31	0.05	2,744	4.59
304	12	0.02	1,122	1.88	349	20	0.03	1,727	2.89	394	31	0.05	2,775	4.65
305	16	0.03	1,138	1.91	350	19	0.03	1,746	2.92	395	35	0.06	2,810	4.71
306	15	0.03	1,153	1.93	351	22	0.04	1,768	2.96	396	30	0.05	2,840	4.76
307	7	0.01	1,160	1.94	352	18	0.03	1,786	2.99	397	28	0.05	2,868	4.80
308	12	0.02	1,172	1.96	353	16	0.03	1,802	3.02	398	29	0.05	2,897	4.85
309	7	0.01	1,179	1.97	354	16	0.03	1,818	3.04	399	36	0.06	2,933	4.91
310	11	0.02	1,190	1.99	355	27	0.05	1,845	3.09	400	28	0.05	2,961	4.96
311	5	0.01	1,195	2.00	356	16	0.03	1,861	3.12	401	39	0.07	3,000	5.02
312	16	0.03	1,211	2.03	357	22	0.04	1,883	3.15	402	27	0.05	3,027	5.07
313	10	0.02	1,221	2.04	358	20	0.03	1,903	3.19	403	41	0.07	3,068	5.14
314	11	0.02	1,232	2.06	359	23	0.04	1,926	3.22	404	22	0.04	3,090	5.17
315	15	0.03	1,247	2.09	360	17	0.03	1,943	3.25	405	46	0.08	3,136	5.25
316	19	0.03	1,266	2.12	361	18	0.03	1,961	3.28	406	39	0.07	3,175	5.32
317	8	0.01	1,274	2.13	362	21	0.04	1,982	3.32	407	37	0.06	3,212	5.38
318	14	0.02	1,288	2.16	363	17	0.03	1,999	3.35	408	36	0.06	3,248	5.44
319	14	0.02	1,302	2.18	364	16	0.03	2,015	3.37	409	27	0.05	3,275	5.48
320	6	0.01	1,308	2.19	365	19	0.03	2,034	3.41	410	42	0.07	3,317	5.55
321	18	0.03	1,326	2.22	366	18	0.03	2,052	3.44	411	27	0.05	3,344	5.60
322	9	0.02	1,335	2.24	367	21	0.04	2,073	3.47	412	47	0.08	3,391	5.68
323	16	0.03	1,351	2.26	368	16	0.03	2,089	3.50	413	46	0.08	3,437	5.75
324	12	0.02	1,363	2.28	369	23	0.04	2,112	3.54	414	43	0.07	3,480	5.83
325	8	0.01	1,371	2.30	370	26	0.04	2,138	3.58	415	31	0.05	3,511	5.88
326	11	0.02	1,382	2.31	371	20	0.03	2,158	3.61	416	41	0.07	3,552	5.95
327	11	0.02	1,393	2.33	372	14	0.02	2,172	3.64	417	40	0.07	3,592	6.01
328	7	0.01	1,400	2.34	373	25	0.04	2,197	3.68	418	44	0.07	3,636	6.09
329	13	0.02	1,413	2.37	374	25	0.04	2,222	3.72	419	40	0.07	3,676	6.16
330	14	0.02	1,427	2.39	375	29	0.05	2,251	3.77	420	38	0.06	3,714	6.22
331	18	0.03	1,445	2.42	376	30	0.05	2,281	3.82	421	42	0.07	3,756	6.29
332	14	0.02	1,459	2.44	377	18	0.03	2,299	3.85	422	46	0.08	3,802	6.37
333	13	0.02	1,472	2.46	378	24	0.04	2,323	3.89	423	50	0.08	3,852	6.45
334	18	0.03	1,490	2.49	379	29	0.05	2,352	3.94	424	37	0.06	3,889	6.51
335	12	0.02	1,502	2.51	380	30	0.05	2,382	3.99	425	55	0.09	3,944	6.60
336	16	0.03	1,518	2.54	381	26	0.04	2,408	4.03	426	46	0.08	3,990	6.68
337	14	0.02	1,532	2.57	382	22	0.04	2,430	4.07	427	40	0.07	4,030	6.75
338	11	0.02	1,543	2.58	383	23	0.04	2,453	4.11	428	50	0.08	4,080	6.83
339	21	0.04	1,564	2.62	384	34	0.06	2,487	4.16	429	54	0.09	4,134	6.92
340	15	0.03	1,579	2.64	385	34	0.06	2,521	4.22	430	48	0.08	4,182	7.00
341	17	0.03	1,596	2.67	386	28	0.05	2,549	4.27	431	74	0.12	4,256	7.13
342	12	0.02	1,608	2.69	387	26	0.04	2,575	4.31	432	53	0.09	4,309	7.21
343	14	0.02	1,622	2.72	388	30	0.05	2,605	4.36	433	46	0.08	4,355	7.29
344	14	0.02	1,636	2.74	389	18	0.03	2,623	4.39	434	54	0.09	4,409	7.38

Table 51. Grade 7 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	57	0.10	4,466	7.48	480	89	0.15	7,797	13.06	525	153	0.26	13,426	22.48
436	48	0.08	4,514	7.56	481	89	0.15	7,886	13.20	526	145	0.24	13,571	22.72
437	53	0.09	4,567	7.65	482	105	0.18	7,991	13.38	527	135	0.23	13,706	22.95
438	52	0.09	4,619	7.73	483	105	0.18	8,096	13.56	528	162	0.27	13,868	23.22
439	55	0.09	4,674	7.83	484	106	0.18	8,202	13.73	529	178	0.30	14,046	23.52
440	56	0.09	4,730	7.92	485	101	0.17	8,303	13.90	530	152	0.25	14,198	23.77
441	63	0.11	4,793	8.03	486	109	0.18	8,412	14.09	531	189	0.32	14,387	24.09
442	55	0.09	4,848	8.12	487	121	0.20	8,533	14.29	532	151	0.25	14,538	24.34
443	68	0.11	4,916	8.23	488	118	0.20	8,651	14.49	533	160	0.27	14,698	24.61
444	50	0.08	4,966	8.32	489	108	0.18	8,759	14.67	534	155	0.26	14,853	24.87
445	70	0.12	5,036	8.43	490	103	0.17	8,862	14.84	535	161	0.27	15,014	25.14
446	61	0.10	5,097	8.53	491	113	0.19	8,975	15.03	536	159	0.27	15,173	25.41
447	54	0.09	5,151	8.62	492	99	0.17	9,074	15.19	537	172	0.29	15,345	25.69
448	75	0.13	5,226	8.75	493	116	0.19	9,190	15.39	538	173	0.29	15,518	25.98
449	59	0.10	5,285	8.85	494	127	0.21	9,317	15.60	539	159	0.27	15,677	26.25
450	70	0.12	5,355	8.97	495	104	0.17	9,421	15.77	540	166	0.28	15,843	26.53
451	65	0.11	5,420	9.08	496	119	0.20	9,540	15.97	541	181	0.30	16,024	26.83
452	81	0.14	5,501	9.21	497	96	0.16	9,636	16.13	542	171	0.29	16,195	27.12
453	58	0.10	5,559	9.31	498	104	0.17	9,740	16.31	543	215	0.36	16,410	27.48
454	79	0.13	5,638	9.44	499	90	0.15	9,830	16.46	544	185	0.31	16,595	27.79
455	67	0.11	5,705	9.55	500	118	0.20	9,948	16.66	545	184	0.31	16,779	28.09
456	73	0.12	5,778	9.67	501	135	0.23	10,083	16.88	546	184	0.31	16,963	28.40
457	84	0.14	5,862	9.82	502	127	0.21	10,210	17.10	547	165	0.28	17,128	28.68
458	74	0.12	5,936	9.94	503	133	0.22	10,343	17.32	548	169	0.28	17,297	28.96
459	81	0.14	6,017	10.07	504	139	0.23	10,482	17.55	549	193	0.32	17,490	29.29
460	65	0.11	6,082	10.18	505	134	0.22	10,616	17.78	550	187	0.31	17,677	29.60
461	80	0.13	6,162	10.32	506	123	0.21	10,739	17.98	551	164	0.27	17,841	29.87
462	63	0.11	6,225	10.42	507	127	0.21	10,866	18.19	552	191	0.32	18,032	30.19
463	80	0.13	6,305	10.56	508	119	0.20	10,985	18.39	553	157	0.26	18,189	30.46
464	91	0.15	6,396	10.71	509	126	0.21	11,111	18.60	554	178	0.30	18,367	30.75
465	83	0.14	6,479	10.85	510	130	0.22	11,241	18.82	555	194	0.32	18,561	31.08
466	78	0.13	6,557	10.98	511	141	0.24	11,382	19.06	556	190	0.32	18,751	31.40
467	75	0.13	6,632	11.10	512	130	0.22	11,512	19.28	557	159	0.27	18,910	31.66
468	83	0.14	6,715	11.24	513	131	0.22	11,643	19.50	558	206	0.34	19,116	32.01
469	84	0.14	6,799	11.38	514	123	0.21	11,766	19.70	559	193	0.32	19,309	32.33
470	97	0.16	6,896	11.55	515	146	0.24	11,912	19.95	560	176	0.29	19,485	32.63
471	79	0.13	6,975	11.68	516	141	0.24	12,053	20.18	561	192	0.32	19,677	32.95
472	84	0.14	7,059	11.82	517	140	0.23	12,193	20.42	562	212	0.35	19,889	33.30
473	81	0.14	7,140	11.96	518	147	0.25	12,340	20.66	563	211	0.35	20,100	33.66
474	87	0.15	7,227	12.10	519	143	0.24	12,483	20.90	564	175	0.29	20,275	33.95
475	89	0.15	7,316	12.25	520	169	0.28	12,652	21.18	565	212	0.35	20,487	34.30
476	82	0.14	7,398	12.39	521	176	0.29	12,828	21.48	566	198	0.33	20,685	34.63
477	116	0.19	7,514	12.58	522	135	0.23	12,963	21.71	567	210	0.35	20,895	34.99
478	96	0.16	7,610	12.74	523	163	0.27	13,126	21.98	568	196	0.33	21,091	35.31
479	98	0.16	7,708	12.91	524	147	0.25	13,273	22.22	569	202	0.34	21,293	35.65

Table 51. Grade 7 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	217	0.36	21,510	36.02	615	244	0.41	31,380	52.54	660	214	0.36	41,460	69.42
571	205	0.34	21,715	36.36	616	235	0.39	31,615	52.94	661	221	0.37	41,681	69.79
572	222	0.37	21,937	36.73	617	238	0.40	31,853	53.33	662	198	0.33	41,879	70.12
573	206	0.34	22,143	37.08	618	214	0.36	32,067	53.69	663	216	0.36	42,095	70.48
574	197	0.33	22,340	37.41	619	225	0.38	32,292	54.07	664	219	0.37	42,314	70.85
575	227	0.38	22,567	37.79	620	245	0.41	32,537	54.48	665	229	0.38	42,543	71.23
576	216	0.36	22,783	38.15	621	242	0.41	32,779	54.89	666	233	0.39	42,776	71.62
577	232	0.39	23,015	38.54	622	230	0.39	33,009	55.27	667	211	0.35	42,987	71.98
578	204	0.34	23,219	38.88	623	238	0.40	33,247	55.67	668	216	0.36	43,203	72.34
579	176	0.29	23,395	39.17	624	217	0.36	33,464	56.03	669	206	0.34	43,409	72.68
580	210	0.35	23,605	39.52	625	230	0.39	33,694	56.42	670	213	0.36	43,622	73.04
581	207	0.35	23,812	39.87	626	240	0.40	33,934	56.82	671	197	0.33	43,819	73.37
582	227	0.38	24,039	40.25	627	234	0.39	34,168	57.21	672	213	0.36	44,032	73.73
583	196	0.33	24,235	40.58	628	227	0.38	34,395	57.59	673	205	0.34	44,237	74.07
584	230	0.39	24,465	40.96	629	223	0.37	34,618	57.96	674	207	0.35	44,444	74.42
585	219	0.37	24,684	41.33	630	227	0.38	34,845	58.34	675	210	0.35	44,654	74.77
586	226	0.38	24,910	41.71	631	218	0.37	35,063	58.71	676	177	0.30	44,831	75.06
587	234	0.39	25,144	42.10	632	204	0.34	35,267	59.05	677	192	0.32	45,023	75.39
588	223	0.37	25,367	42.47	633	226	0.38	35,493	59.43	678	230	0.39	45,253	75.77
589	212	0.35	25,579	42.83	634	217	0.36	35,710	59.79	679	166	0.28	45,419	76.05
590	199	0.33	25,778	43.16	635	248	0.42	35,958	60.21	680	184	0.31	45,603	76.36
591	209	0.35	25,987	43.51	636	229	0.38	36,187	60.59	681	199	0.33	45,802	76.69
592	212	0.35	26,199	43.87	637	229	0.38	36,416	60.97	682	184	0.31	45,986	77.00
593	225	0.38	26,424	44.24	638	208	0.35	36,624	61.32	683	199	0.33	46,185	77.33
594	260	0.44	26,684	44.68	639	221	0.37	36,845	61.69	684	191	0.32	46,376	77.65
595	201	0.34	26,885	45.02	640	217	0.36	37,062	62.06	685	179	0.30	46,555	77.95
596	205	0.34	27,090	45.36	641	211	0.35	37,273	62.41	686	185	0.31	46,740	78.26
597	225	0.38	27,315	45.74	642	219	0.37	37,492	62.78	687	171	0.29	46,911	78.55
598	234	0.39	27,549	46.13	643	215	0.36	37,707	63.14	688	175	0.29	47,086	78.84
599	219	0.37	27,768	46.49	644	242	0.41	37,949	63.54	689	189	0.32	47,275	79.16
600	228	0.38	27,996	46.88	645	223	0.37	38,172	63.92	690	181	0.30	47,456	79.46
601	202	0.34	28,198	47.21	646	220	0.37	38,392	64.28	691	168	0.28	47,624	79.74
602	219	0.37	28,417	47.58	647	232	0.39	38,624	64.67	692	161	0.27	47,785	80.01
603	214	0.36	28,631	47.94	648	235	0.39	38,859	65.07	693	193	0.32	47,978	80.33
604	221	0.37	28,852	48.31	649	218	0.37	39,077	65.43	694	174	0.29	48,152	80.63
605	214	0.36	29,066	48.67	650	209	0.35	39,286	65.78	695	180	0.30	48,332	80.93
606	220	0.37	29,286	49.04	651	212	0.35	39,498	66.14	696	169	0.28	48,501	81.21
607	224	0.38	29,510	49.41	652	208	0.35	39,706	66.48	697	202	0.34	48,703	81.55
608	224	0.38	29,734	49.79	653	250	0.42	39,956	66.90	698	180	0.30	48,883	81.85
609	264	0.44	29,998	50.23	654	202	0.34	40,158	67.24	699	164	0.27	49,047	82.12
610	241	0.40	30,239	50.63	655	216	0.36	40,374	67.60	700	182	0.30	49,229	82.43
611	215	0.36	30,454	50.99	656	241	0.40	40,615	68.01	701	137	0.23	49,366	82.66
612	215	0.36	30,669	51.35	657	213	0.36	40,828	68.36	702	155	0.26	49,521	82.92
613	237	0.40	30,906	51.75	658	218	0.37	41,046	68.73	703	166	0.28	49,687	83.20
614	230	0.39	31,136	52.13	659	200	0.33	41,246	69.06	704	167	0.28	49,854	83.48

Table 51. Grade 7 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	153	0.26	50,007	83.73	750	86	0.14	55,589	93.08	795	36	0.06	58,295	97.61
706	152	0.25	50,159	83.99	751	83	0.14	55,672	93.22	796	37	0.06	58,332	97.67
707	170	0.28	50,329	84.27	752	100	0.17	55,772	93.38	797	31	0.05	58,363	97.72
708	145	0.24	50,474	84.51	753	80	0.13	55,852	93.52	798	37	0.06	58,400	97.78
709	162	0.27	50,636	84.78	754	81	0.14	55,933	93.65	799	25	0.04	58,425	97.83
710	154	0.26	50,790	85.04	755	79	0.13	56,012	93.79	800	32	0.05	58,457	97.88
711	155	0.26	50,945	85.30	756	84	0.14	56,096	93.93	801	24	0.04	58,481	97.92
712	150	0.25	51,095	85.55	757	65	0.11	56,161	94.04	802	39	0.07	58,520	97.99
713	146	0.24	51,241	85.80	758	79	0.13	56,240	94.17	803	29	0.05	58,549	98.03
714	131	0.22	51,372	86.02	759	78	0.13	56,318	94.30	804	30	0.05	58,579	98.08
715	147	0.25	51,519	86.26	760	70	0.12	56,388	94.42	805	33	0.06	58,612	98.14
716	146	0.24	51,665	86.51	761	69	0.12	56,457	94.53	806	30	0.05	58,642	98.19
717	137	0.23	51,802	86.74	762	62	0.10	56,519	94.64	807	23	0.04	58,665	98.23
718	135	0.23	51,937	86.96	763	66	0.11	56,585	94.75	808	21	0.04	58,686	98.26
719	130	0.22	52,067	87.18	764	81	0.14	56,666	94.88	809	31	0.05	58,717	98.32
720	147	0.25	52,214	87.43	765	69	0.12	56,735	95.00	810	35	0.06	58,752	98.37
721	113	0.19	52,327	87.62	766	78	0.13	56,813	95.13	811	26	0.04	58,778	98.42
722	154	0.26	52,481	87.87	767	66	0.11	56,879	95.24	812	26	0.04	58,804	98.46
723	133	0.22	52,614	88.10	768	74	0.12	56,953	95.36	813	34	0.06	58,838	98.52
724	131	0.22	52,745	88.32	769	64	0.11	57,017	95.47	814	22	0.04	58,860	98.55
725	135	0.23	52,880	88.54	770	67	0.11	57,084	95.58	815	21	0.04	58,881	98.59
726	134	0.22	53,014	88.77	771	66	0.11	57,150	95.69	816	24	0.04	58,905	98.63
727	126	0.21	53,140	88.98	772	52	0.09	57,202	95.78	817	27	0.05	58,932	98.68
728	131	0.22	53,271	89.20	773	61	0.10	57,263	95.88	818	19	0.03	58,951	98.71
729	132	0.22	53,403	89.42	774	69	0.12	57,332	96.00	819	23	0.04	58,974	98.75
730	115	0.19	53,518	89.61	775	68	0.11	57,400	96.11	820	22	0.04	58,996	98.78
731	126	0.21	53,644	89.82	776	65	0.11	57,465	96.22	821	23	0.04	59,019	98.82
732	133	0.22	53,777	90.04	777	49	0.08	57,514	96.30	822	13	0.02	59,032	98.84
733	132	0.22	53,909	90.27	778	63	0.11	57,577	96.41	823	14	0.02	59,046	98.87
734	103	0.17	54,012	90.44	779	43	0.07	57,620	96.48	824	17	0.03	59,063	98.89
735	106	0.18	54,118	90.62	780	50	0.08	57,670	96.56	825	19	0.03	59,082	98.93
736	121	0.20	54,239	90.82	781	47	0.08	57,717	96.64	826	20	0.03	59,102	98.96
737	140	0.23	54,379	91.05	782	53	0.09	57,770	96.73	827	14	0.02	59,116	98.98
738	105	0.18	54,484	91.23	783	48	0.08	57,818	96.81	828	18	0.03	59,134	99.01
739	113	0.19	54,597	91.42	784	43	0.07	57,861	96.88	829	19	0.03	59,153	99.05
740	99	0.17	54,696	91.58	785	51	0.09	57,912	96.97	830	12	0.02	59,165	99.07
741	97	0.16	54,793	91.75	786	42	0.07	57,954	97.04	831	25	0.04	59,190	99.11
742	101	0.17	54,894	91.91	787	45	0.08	57,999	97.11	832	9	0.02	59,199	99.12
743	91	0.15	54,985	92.07	788	34	0.06	58,033	97.17	833	11	0.02	59,210	99.14
744	86	0.14	55,071	92.21	789	40	0.07	58,073	97.24	834	16	0.03	59,226	99.17
745	84	0.14	55,155	92.35	790	35	0.06	58,108	97.30	835	13	0.02	59,239	99.19
746	84	0.14	55,239	92.49	791	37	0.06	58,145	97.36	836	12	0.02	59,251	99.21
747	81	0.14	55,320	92.63	792	40	0.07	58,185	97.42	837	13	0.02	59,264	99.23
748	71	0.12	55,391	92.75	793	38	0.06	58,223	97.49	838	15	0.03	59,279	99.26
749	112	0.19	55,503	92.93	794	36	0.06	58,259	97.55	839	14	0.02	59,293	99.28

Table 51. Grade 7 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	10	0.02	59,303	99.30	885	2	0.00	59,593	99.78
841	7	0.01	59,310	99.31	886	4	0.01	59,597	99.79
842	10	0.02	59,320	99.33	887	4	0.01	59,601	99.80
843	6	0.01	59,326	99.34	888	4	0.01	59,605	99.80
844	12	0.02	59,338	99.36	889	5	0.01	59,610	99.81
845	5	0.01	59,343	99.36	890	3	0.01	59,613	99.82
846	8	0.01	59,351	99.38	891	1	0.00	59,614	99.82
847	16	0.03	59,367	99.40	892	6	0.01	59,620	99.83
848	14	0.02	59,381	99.43	893	1	0.00	59,621	99.83
849	4	0.01	59,385	99.43	894	2	0.00	59,623	99.83
850	6	0.01	59,391	99.44	895	5	0.01	59,628	99.84
851	9	0.02	59,400	99.46	896	5	0.01	59,633	99.85
852	5	0.01	59,405	99.47	897	1	0.00	59,634	99.85
853	5	0.01	59,410	99.48	898	2	0.00	59,636	99.85
854	9	0.02	59,419	99.49	899	2	0.00	59,638	99.86
855	6	0.01	59,425	99.50	900	85	0.14	59,723	100.00
856	9	0.02	59,434	99.52					
857	8	0.01	59,442	99.53					
858	7	0.01	59,449	99.54					
859	13	0.02	59,462	99.56					
860	9	0.02	59,471	99.58					
861	8	0.01	59,479	99.59					
862	8	0.01	59,487	99.60					
863	5	0.01	59,492	99.61					
864	1	0.00	59,493	99.61					
865	5	0.01	59,498	99.62					
866	7	0.01	59,505	99.63					
867	9	0.02	59,514	99.65					
868	4	0.01	59,518	99.66					
869	4	0.01	59,522	99.66					
870	7	0.01	59,529	99.68					
871	4	0.01	59,533	99.68					
872	5	0.01	59,538	99.69					
873	8	0.01	59,546	99.70					
874	7	0.01	59,553	99.72					
875	3	0.01	59,556	99.72					
876	4	0.01	59,560	99.73					
877	4	0.01	59,564	99.73					
878	4	0.01	59,568	99.74					
879	5	0.01	59,573	99.75					
880	3	0.01	59,576	99.75					
881	5	0.01	59,581	99.76					
882	4	0.01	59,585	99.77					
883	3	0.01	59,588	99.77					
884	3	0.01	59,591	99.78					

Table 52. Grade 8 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,093	1.89	1,093	1.89	345	20	0.03	1,940	3.35	390	41	0.07	3,443	5.95
301	13	0.02	1,106	1.91	346	23	0.04	1,963	3.39	391	51	0.09	3,494	6.04
302	18	0.03	1,124	1.94	347	24	0.04	1,987	3.43	392	46	0.08	3,540	6.11
303	14	0.02	1,138	1.97	348	19	0.03	2,006	3.46	393	36	0.06	3,576	6.18
304	22	0.04	1,160	2.00	349	28	0.05	2,034	3.51	394	43	0.07	3,619	6.25
305	8	0.01	1,168	2.02	350	19	0.03	2,053	3.55	395	47	0.08	3,666	6.33
306	16	0.03	1,184	2.05	351	21	0.04	2,074	3.58	396	46	0.08	3,712	6.41
307	14	0.02	1,198	2.07	352	21	0.04	2,095	3.62	397	46	0.08	3,758	6.49
308	6	0.01	1,204	2.08	353	36	0.06	2,131	3.68	398	29	0.05	3,787	6.54
309	16	0.03	1,220	2.11	354	23	0.04	2,154	3.72	399	41	0.07	3,828	6.61
310	14	0.02	1,234	2.13	355	22	0.04	2,176	3.76	400	48	0.08	3,876	6.69
311	15	0.03	1,249	2.16	356	24	0.04	2,200	3.80	401	60	0.10	3,936	6.80
312	18	0.03	1,267	2.19	357	37	0.06	2,237	3.86	402	59	0.10	3,995	6.90
313	12	0.02	1,279	2.21	358	25	0.04	2,262	3.91	403	36	0.06	4,031	6.96
314	19	0.03	1,298	2.24	359	43	0.07	2,305	3.98	404	56	0.10	4,087	7.06
315	16	0.03	1,314	2.27	360	27	0.05	2,332	4.03	405	48	0.08	4,135	7.14
316	17	0.03	1,331	2.30	361	34	0.06	2,366	4.09	406	51	0.09	4,186	7.23
317	9	0.02	1,340	2.31	362	23	0.04	2,389	4.13	407	46	0.08	4,232	7.31
318	20	0.03	1,360	2.35	363	29	0.05	2,418	4.18	408	54	0.09	4,286	7.40
319	17	0.03	1,377	2.38	364	31	0.05	2,449	4.23	409	56	0.10	4,342	7.50
320	25	0.04	1,402	2.42	365	35	0.06	2,484	4.29	410	56	0.10	4,398	7.60
321	20	0.03	1,422	2.46	366	32	0.06	2,516	4.35	411	50	0.09	4,448	7.68
322	16	0.03	1,438	2.48	367	29	0.05	2,545	4.40	412	64	0.11	4,512	7.79
323	11	0.02	1,449	2.50	368	36	0.06	2,581	4.46	413	68	0.12	4,580	7.91
324	16	0.03	1,465	2.53	369	37	0.06	2,618	4.52	414	48	0.08	4,628	7.99
325	24	0.04	1,489	2.57	370	41	0.07	2,659	4.59	415	49	0.08	4,677	8.08
326	21	0.04	1,510	2.61	371	32	0.06	2,691	4.65	416	57	0.10	4,734	8.18
327	23	0.04	1,533	2.65	372	37	0.06	2,728	4.71	417	52	0.09	4,786	8.27
328	20	0.03	1,553	2.68	373	41	0.07	2,769	4.78	418	60	0.10	4,846	8.37
329	18	0.03	1,571	2.71	374	41	0.07	2,810	4.85	419	54	0.09	4,900	8.46
330	15	0.03	1,586	2.74	375	43	0.07	2,853	4.93	420	59	0.10	4,959	8.57
331	21	0.04	1,607	2.78	376	50	0.09	2,903	5.01	421	68	0.12	5,027	8.68
332	18	0.03	1,625	2.81	377	30	0.05	2,933	5.07	422	62	0.11	5,089	8.79
333	19	0.03	1,644	2.84	378	38	0.07	2,971	5.13	423	55	0.10	5,144	8.89
334	30	0.05	1,674	2.89	379	35	0.06	3,006	5.19	424	73	0.13	5,217	9.01
335	24	0.04	1,698	2.93	380	33	0.06	3,039	5.25	425	68	0.12	5,285	9.13
336	21	0.04	1,719	2.97	381	42	0.07	3,081	5.32	426	59	0.10	5,344	9.23
337	28	0.05	1,747	3.02	382	39	0.07	3,120	5.39	427	69	0.12	5,413	9.35
338	19	0.03	1,766	3.05	383	28	0.05	3,148	5.44	428	73	0.13	5,486	9.48
339	21	0.04	1,787	3.09	384	46	0.08	3,194	5.52	429	85	0.15	5,571	9.62
340	24	0.04	1,811	3.13	385	44	0.08	3,238	5.59	430	67	0.12	5,638	9.74
341	30	0.05	1,841	3.18	386	34	0.06	3,272	5.65	431	71	0.12	5,709	9.86
342	22	0.04	1,863	3.22	387	46	0.08	3,318	5.73	432	63	0.11	5,772	9.97
343	34	0.06	1,897	3.28	388	45	0.08	3,363	5.81	433	75	0.13	5,847	10.10
344	23	0.04	1,920	3.32	389	39	0.07	3,402	5.88	434	75	0.13	5,922	10.23

Table 52. Grade 8 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
435	68	0.12	5,990	10.35	480	105	0.18	9,982	17.24	525	147	0.25	15,983	27.61
436	55	0.10	6,045	10.44	481	124	0.21	10,106	17.46	526	144	0.25	16,127	27.86
437	74	0.13	6,119	10.57	482	113	0.20	10,219	17.65	527	165	0.29	16,292	28.14
438	89	0.15	6,208	10.72	483	109	0.19	10,328	17.84	528	172	0.30	16,464	28.44
439	75	0.13	6,283	10.85	484	103	0.18	10,431	18.02	529	170	0.29	16,634	28.73
440	85	0.15	6,368	11.00	485	107	0.18	10,538	18.20	530	163	0.28	16,797	29.01
441	73	0.13	6,441	11.13	486	126	0.22	10,664	18.42	531	149	0.26	16,946	29.27
442	84	0.15	6,525	11.27	487	108	0.19	10,772	18.61	532	179	0.31	17,125	29.58
443	68	0.12	6,593	11.39	488	119	0.21	10,891	18.81	533	167	0.29	17,292	29.87
444	64	0.11	6,657	11.50	489	116	0.20	11,007	19.01	534	158	0.27	17,450	30.14
445	59	0.10	6,716	11.60	490	148	0.26	11,155	19.27	535	154	0.27	17,604	30.41
446	66	0.11	6,782	11.71	491	136	0.23	11,291	19.50	536	168	0.29	17,772	30.70
447	70	0.12	6,852	11.84	492	123	0.21	11,414	19.72	537	187	0.32	17,959	31.02
448	89	0.15	6,941	11.99	493	106	0.18	11,520	19.90	538	184	0.32	18,143	31.34
449	89	0.15	7,030	12.14	494	128	0.22	11,648	20.12	539	164	0.28	18,307	31.62
450	74	0.13	7,104	12.27	495	121	0.21	11,769	20.33	540	181	0.31	18,488	31.93
451	82	0.14	7,186	12.41	496	124	0.21	11,893	20.54	541	169	0.29	18,657	32.23
452	69	0.12	7,255	12.53	497	122	0.21	12,015	20.75	542	178	0.31	18,835	32.53
453	105	0.18	7,360	12.71	498	117	0.20	12,132	20.96	543	175	0.30	19,010	32.84
454	94	0.16	7,454	12.88	499	129	0.22	12,261	21.18	544	182	0.31	19,192	33.15
455	72	0.12	7,526	13.00	500	143	0.25	12,404	21.43	545	166	0.29	19,358	33.44
456	86	0.15	7,612	13.15	501	131	0.23	12,535	21.65	546	187	0.32	19,545	33.76
457	77	0.13	7,689	13.28	502	123	0.21	12,658	21.86	547	201	0.35	19,746	34.11
458	88	0.15	7,777	13.43	503	130	0.22	12,788	22.09	548	190	0.33	19,936	34.44
459	92	0.16	7,869	13.59	504	121	0.21	12,909	22.30	549	178	0.31	20,114	34.74
460	101	0.17	7,970	13.77	505	141	0.24	13,050	22.54	550	174	0.30	20,288	35.04
461	88	0.15	8,058	13.92	506	142	0.25	13,192	22.79	551	177	0.31	20,465	35.35
462	94	0.16	8,152	14.08	507	156	0.27	13,348	23.06	552	189	0.33	20,654	35.68
463	90	0.16	8,242	14.24	508	147	0.25	13,495	23.31	553	206	0.36	20,860	36.03
464	105	0.18	8,347	14.42	509	156	0.27	13,651	23.58	554	187	0.32	21,047	36.35
465	88	0.15	8,435	14.57	510	143	0.25	13,794	23.83	555	203	0.35	21,250	36.71
466	108	0.19	8,543	14.76	511	148	0.26	13,942	24.08	556	195	0.34	21,445	37.04
467	78	0.13	8,621	14.89	512	127	0.22	14,069	24.30	557	174	0.30	21,619	37.34
468	119	0.21	8,740	15.10	513	138	0.24	14,207	24.54	558	184	0.32	21,803	37.66
469	108	0.19	8,848	15.28	514	141	0.24	14,348	24.78	559	195	0.34	21,998	38.00
470	90	0.16	8,938	15.44	515	150	0.26	14,498	25.04	560	170	0.29	22,168	38.29
471	106	0.18	9,044	15.62	516	146	0.25	14,644	25.29	561	201	0.35	22,369	38.64
472	92	0.16	9,136	15.78	517	143	0.25	14,787	25.54	562	204	0.35	22,573	38.99
473	98	0.17	9,234	15.95	518	157	0.27	14,944	25.81	563	191	0.33	22,764	39.32
474	102	0.18	9,336	16.13	519	145	0.25	15,089	26.06	564	181	0.31	22,945	39.63
475	114	0.20	9,450	16.32	520	131	0.23	15,220	26.29	565	180	0.31	23,125	39.94
476	109	0.19	9,559	16.51	521	154	0.27	15,374	26.56	566	188	0.32	23,313	40.27
477	106	0.18	9,665	16.69	522	174	0.30	15,548	26.86	567	188	0.32	23,501	40.59
478	120	0.21	9,785	16.90	523	148	0.26	15,696	27.11	568	206	0.36	23,707	40.95
479	92	0.16	9,877	17.06	524	140	0.24	15,836	27.35	569	194	0.34	23,901	41.28

Table 52. Grade 8 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
570	191	0.33	24,092	41.61	615	217	0.37	33,598	58.03	660	189	0.33	42,741	73.83
571	206	0.36	24,298	41.97	616	233	0.40	33,831	58.44	661	183	0.32	42,924	74.14
572	217	0.37	24,515	42.34	617	205	0.35	34,036	58.79	662	210	0.36	43,134	74.51
573	211	0.36	24,726	42.71	618	196	0.34	34,232	59.13	663	170	0.29	43,304	74.80
574	224	0.39	24,950	43.10	619	229	0.40	34,461	59.52	664	205	0.35	43,509	75.15
575	183	0.32	25,133	43.41	620	229	0.40	34,690	59.92	665	173	0.30	43,682	75.45
576	220	0.38	25,353	43.79	621	173	0.30	34,863	60.22	666	194	0.34	43,876	75.79
577	231	0.40	25,584	44.19	622	208	0.36	35,071	60.58	667	180	0.31	44,056	76.10
578	199	0.34	25,783	44.53	623	194	0.34	35,265	60.91	668	173	0.30	44,229	76.40
579	204	0.35	25,987	44.89	624	203	0.35	35,468	61.26	669	194	0.34	44,423	76.73
580	214	0.37	26,201	45.26	625	225	0.39	35,693	61.65	670	170	0.29	44,593	77.03
581	220	0.38	26,421	45.64	626	220	0.38	35,913	62.03	671	188	0.32	44,781	77.35
582	192	0.33	26,613	45.97	627	212	0.37	36,125	62.40	672	176	0.30	44,957	77.65
583	198	0.34	26,811	46.31	628	208	0.36	36,333	62.76	673	173	0.30	45,130	77.95
584	210	0.36	27,021	46.67	629	201	0.35	36,534	63.10	674	179	0.31	45,309	78.26
585	218	0.38	27,239	47.05	630	192	0.33	36,726	63.44	675	141	0.24	45,450	78.51
586	220	0.38	27,459	47.43	631	231	0.40	36,957	63.84	676	159	0.27	45,609	78.78
587	230	0.40	27,689	47.83	632	175	0.30	37,132	64.14	677	193	0.33	45,802	79.11
588	212	0.37	27,901	48.19	633	224	0.39	37,356	64.52	678	142	0.25	45,944	79.36
589	222	0.38	28,123	48.58	634	218	0.38	37,574	64.90	679	145	0.25	46,089	79.61
590	222	0.38	28,345	48.96	635	210	0.36	37,784	65.26	680	157	0.27	46,246	79.88
591	205	0.35	28,550	49.31	636	224	0.39	38,008	65.65	681	160	0.28	46,406	80.16
592	212	0.37	28,762	49.68	637	199	0.34	38,207	65.99	682	141	0.24	46,547	80.40
593	214	0.37	28,976	50.05	638	211	0.36	38,418	66.36	683	181	0.31	46,728	80.71
594	209	0.36	29,185	50.41	639	228	0.39	38,646	66.75	684	158	0.27	46,886	80.99
595	207	0.36	29,392	50.77	640	201	0.35	38,847	67.10	685	144	0.25	47,030	81.23
596	217	0.37	29,609	51.14	641	188	0.32	39,035	67.42	686	185	0.32	47,215	81.55
597	229	0.40	29,838	51.54	642	185	0.32	39,220	67.74	687	157	0.27	47,372	81.83
598	196	0.34	30,034	51.88	643	222	0.38	39,442	68.13	688	182	0.31	47,554	82.14
599	228	0.39	30,262	52.27	644	211	0.36	39,653	68.49	689	152	0.26	47,706	82.40
600	206	0.36	30,468	52.63	645	206	0.36	39,859	68.85	690	139	0.24	47,845	82.64
601	187	0.32	30,655	52.95	646	192	0.33	40,051	69.18	691	172	0.30	48,017	82.94
602	193	0.33	30,848	53.28	647	213	0.37	40,264	69.55	692	119	0.21	48,136	83.15
603	200	0.35	31,048	53.63	648	187	0.32	40,451	69.87	693	148	0.26	48,284	83.40
604	242	0.42	31,290	54.05	649	215	0.37	40,666	70.24	694	147	0.25	48,431	83.65
605	187	0.32	31,477	54.37	650	186	0.32	40,852	70.56	695	180	0.31	48,611	83.97
606	206	0.36	31,683	54.73	651	226	0.39	41,078	70.95	696	136	0.23	48,747	84.20
607	215	0.37	31,898	55.10	652	174	0.30	41,252	71.25	697	143	0.25	48,890	84.45
608	214	0.37	32,112	55.47	653	168	0.29	41,420	71.54	698	132	0.23	49,022	84.68
609	213	0.37	32,325	55.83	654	184	0.32	41,604	71.86	699	146	0.25	49,168	84.93
610	208	0.36	32,533	56.19	655	201	0.35	41,805	72.21	700	149	0.26	49,317	85.18
611	202	0.35	32,735	56.54	656	192	0.33	41,997	72.54	701	121	0.21	49,438	85.39
612	207	0.36	32,942	56.90	657	183	0.32	42,180	72.86	702	129	0.22	49,567	85.62
613	214	0.37	33,156	57.27	658	194	0.34	42,374	73.19	703	143	0.25	49,710	85.86
614	225	0.39	33,381	57.66	659	178	0.31	42,552	73.50	704	141	0.24	49,851	86.11

Table 52. Grade 8 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
705	117	0.20	49,968	86.31	750	91	0.16	54,542	94.21	795	29	0.05	56,783	98.08
706	150	0.26	50,118	86.57	751	96	0.17	54,638	94.38	796	26	0.04	56,809	98.13
707	115	0.20	50,233	86.77	752	76	0.13	54,714	94.51	797	35	0.06	56,844	98.19
708	145	0.25	50,378	87.02	753	65	0.11	54,779	94.62	798	32	0.06	56,876	98.24
709	118	0.20	50,496	87.22	754	71	0.12	54,850	94.74	799	23	0.04	56,899	98.28
710	150	0.26	50,646	87.48	755	56	0.10	54,906	94.84	800	28	0.05	56,927	98.33
711	125	0.22	50,771	87.70	756	61	0.11	54,967	94.94	801	33	0.06	56,960	98.39
712	118	0.20	50,889	87.90	757	72	0.12	55,039	95.07	802	19	0.03	56,979	98.42
713	108	0.19	50,997	88.09	758	70	0.12	55,109	95.19	803	29	0.05	57,008	98.47
714	126	0.22	51,123	88.30	759	68	0.12	55,177	95.31	804	35	0.06	57,043	98.53
715	110	0.19	51,233	88.49	760	62	0.11	55,239	95.41	805	21	0.04	57,064	98.57
716	117	0.20	51,350	88.70	761	73	0.13	55,312	95.54	806	24	0.04	57,088	98.61
717	126	0.22	51,476	88.91	762	47	0.08	55,359	95.62	807	23	0.04	57,111	98.65
718	106	0.18	51,582	89.10	763	61	0.11	55,420	95.73	808	31	0.05	57,142	98.70
719	93	0.16	51,675	89.26	764	68	0.12	55,488	95.84	809	25	0.04	57,167	98.74
720	100	0.17	51,775	89.43	765	65	0.11	55,553	95.96	810	16	0.03	57,183	98.77
721	113	0.20	51,888	89.63	766	52	0.09	55,605	96.05	811	18	0.03	57,201	98.80
722	94	0.16	51,982	89.79	767	59	0.10	55,664	96.15	812	25	0.04	57,226	98.85
723	122	0.21	52,104	90.00	768	47	0.08	55,711	96.23	813	21	0.04	57,247	98.88
724	109	0.19	52,213	90.19	769	52	0.09	55,763	96.32	814	18	0.03	57,265	98.91
725	87	0.15	52,300	90.34	770	53	0.09	55,816	96.41	815	21	0.04	57,286	98.95
726	96	0.17	52,396	90.50	771	45	0.08	55,861	96.49	816	18	0.03	57,304	98.98
727	79	0.14	52,475	90.64	772	42	0.07	55,903	96.56	817	17	0.03	57,321	99.01
728	91	0.16	52,566	90.80	773	42	0.07	55,945	96.63	818	14	0.02	57,335	99.03
729	127	0.22	52,693	91.02	774	48	0.08	55,993	96.72	819	12	0.02	57,347	99.06
730	92	0.16	52,785	91.18	775	40	0.07	56,033	96.79	820	20	0.03	57,367	99.09
731	120	0.21	52,905	91.38	776	43	0.07	56,076	96.86	821	12	0.02	57,379	99.11
732	95	0.16	53,000	91.55	777	48	0.08	56,124	96.94	822	21	0.04	57,400	99.15
733	108	0.19	53,108	91.73	778	53	0.09	56,177	97.03	823	18	0.03	57,418	99.18
734	92	0.16	53,200	91.89	779	43	0.07	56,220	97.11	824	10	0.02	57,428	99.20
735	91	0.16	53,291	92.05	780	49	0.08	56,269	97.19	825	12	0.02	57,440	99.22
736	112	0.19	53,403	92.24	781	31	0.05	56,300	97.25	826	11	0.02	57,451	99.23
737	85	0.15	53,488	92.39	782	48	0.08	56,348	97.33	827	15	0.03	57,466	99.26
738	84	0.15	53,572	92.53	783	36	0.06	56,384	97.39	828	8	0.01	57,474	99.27
739	78	0.13	53,650	92.67	784	38	0.07	56,422	97.46	829	6	0.01	57,480	99.28
740	85	0.15	53,735	92.82	785	34	0.06	56,456	97.52	830	12	0.02	57,492	99.31
741	86	0.15	53,821	92.96	786	33	0.06	56,489	97.57	831	11	0.02	57,503	99.32
742	77	0.13	53,898	93.10	787	39	0.07	56,528	97.64	832	9	0.02	57,512	99.34
743	78	0.13	53,976	93.23	788	26	0.04	56,554	97.69	833	14	0.02	57,526	99.36
744	85	0.15	54,061	93.38	789	41	0.07	56,595	97.76	834	14	0.02	57,540	99.39
745	74	0.13	54,135	93.51	790	39	0.07	56,634	97.82	835	11	0.02	57,551	99.41
746	83	0.14	54,218	93.65	791	32	0.06	56,666	97.88	836	5	0.01	57,556	99.42
747	85	0.15	54,303	93.80	792	30	0.05	56,696	97.93	837	9	0.02	57,565	99.43
748	75	0.13	54,378	93.93	793	32	0.06	56,728	97.99	838	6	0.01	57,571	99.44
749	73	0.13	54,451	94.05	794	26	0.04	56,754	98.03	839	12	0.02	57,583	99.46

Table 52. Grade 8 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	13	0.02	57,596	99.49	885	3	0.01	57,825	99.88
841	17	0.03	57,613	99.51	886	2	0.00	57,827	99.88
842	6	0.01	57,619	99.52	887	2	0.00	57,829	99.89
843	9	0.02	57,628	99.54	888	2	0.00	57,831	99.89
844	12	0.02	57,640	99.56	889	2	0.00	57,833	99.89
845	8	0.01	57,648	99.58	890	3	0.01	57,836	99.90
846	8	0.01	57,656	99.59	891	4	0.01	57,840	99.91
847	10	0.02	57,666	99.61	892	2	0.00	57,842	99.91
848	3	0.01	57,669	99.61	893	4	0.01	57,846	99.92
849	3	0.01	57,672	99.62	894	1	0.00	57,847	99.92
850	4	0.01	57,676	99.62	895	1	0.00	57,848	99.92
851	7	0.01	57,683	99.64	896	1	0.00	57,849	99.92
852	4	0.01	57,687	99.64	897	2	0.00	57,851	99.93
853	7	0.01	57,694	99.65	898	2	0.00	57,853	99.93
854	4	0.01	57,698	99.66	900	41	0.07	57,894	100.00
855	5	0.01	57,703	99.67					
856	6	0.01	57,709	99.68					
857	7	0.01	57,716	99.69					
858	7	0.01	57,723	99.70					
859	7	0.01	57,730	99.72					
860	8	0.01	57,738	99.73					
861	5	0.01	57,743	99.74					
862	8	0.01	57,751	99.75					
863	6	0.01	57,757	99.76					
864	1	0.00	57,758	99.77					
865	5	0.01	57,763	99.77					
866	3	0.01	57,766	99.78					
867	3	0.01	57,769	99.78					
868	4	0.01	57,773	99.79					
869	3	0.01	57,776	99.80					
870	1	0.00	57,777	99.80					
871	1	0.00	57,778	99.80					
872	3	0.01	57,781	99.80					
873	3	0.01	57,784	99.81					
874	3	0.01	57,787	99.82					
875	4	0.01	57,791	99.82					
876	7	0.01	57,798	99.83					
877	5	0.01	57,803	99.84					
878	2	0.00	57,805	99.85					
879	7	0.01	57,812	99.86					
880	2	0.00	57,814	99.86					
881	2	0.00	57,816	99.87					
882	3	0.01	57,819	99.87					
883	2	0.00	57,821	99.87					
884	1	0.00	57,822	99.88					

Table 53. Grade 4 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
History	1	3.4	1.9	34.4%
	2	3.9	1.9	42.9%
Geography	1	5.2	2.1	46.9%
	2	3.6	2.0	40.4%
Economics	1	3.8	2.0	47.9%
	2	3.8	2.1	41.7%
Civics	1	4.1	2.1	50.8%
	2	4.4	2.4	40.3%

Table 54. Grade 5 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
Physical Science	1	8.2	3.8	40.9%
Life Science	1	7.1	2.8	55.0%
	2	8.7	3.7	51.3%
Earth Systems Science	1	5.8	2.3	57.8%
	2	5.1	2.4	46.3%
	3	4.7	2.1	51.9%

Table 55. Grade 7 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
History	1	4.5	2.1	56.2%
	2	5.2	2.7	43.2%
Geography	1	4.7	2.1	52.2%
	2	4.5	1.7	50.2%
Economics	1	3.9	2.1	49.3%
	2	3.9	1.9	48.2%
Civics	1	5.1	2.1	56.3%
	2	4.2	2.0	46.7%

Table 56. Grade 8 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
Physical Science	1	2.9	1.9	41.9%
	2	2.6	1.9	36.7%
	3	3.9	1.7	55.7%
	4	3.4	1.6	49.1%
Life Science	1	6.6	3.1	50.7%
	2	4.6	2.5	41.8%
Earth Systems Science	1	3.7	1.7	52.5%
	2	3.1	1.8	51.6%
	3	3.6	1.7	51.3%
	4	3.2	1.9	45.2%

Table 57. Grade 4 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.04	0.64	0.45
2	0.03	0.50	0.45
3	0.03	0.75	0.30
4	0.06	0.86	0.36
5	1.88	0.56	0.39
6	0.15	0.44	0.35
7	2.45	0.54	0.37
8	2.51	0.30	0.27
9	1.85	0.26	0.23
10	0.06	0.42	0.43
11	0.34	0.64	0.36
12	4.61	0.35	0.52
13	0.93	0.45	0.23
14	0.47	0.53	0.31
15	1.56	0.42	0.36
16	0.47	0.64	0.39
17	4.16	0.42	0.34
18	2.25	0.58	0.19
19	0.06	0.26	0.26
20	1.83	0.27	0.16
21	1.68	0.54	0.28
22	0.76	0.59	0.50
23	0.14	0.60	0.34
24	0.14	0.30	0.41
25	0.10	0.29	0.23
26	0.35	0.30	0.22
27	0.35	0.48	0.18
28	0.33	0.53	0.34
29	2.46	0.29	0.20
30	0.25	0.66	0.33
31	0.69	0.53	0.34
32	0.86	0.58	0.36
33	0.45	0.66	0.48
34	0.16	0.72	0.48
35	0.20	0.45	0.37
36	0.87	0.53	0.45
37	0.23	0.39	0.15
38	0.53	0.35	0.32
39	0.10	0.45	0.31

Table 58. Grade 4 Constructed-Response Classical Statistics

Item	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	1.00	46.02	30.25	17.13	5.60	0.27	0.59
2	3.12	33.75	14.57	20.49	28.08	0.47	0.60
3	4.69	24.74	36.78	20.74	13.06	0.39	0.60
4	0.41	8.24	13.59	49.73	28.03	0.66	0.54
5	0.69	21.04	36.50	32.20	9.57	0.43	0.62
6	1.32	32.13	48.45	16.44	1.66	0.29	0.51
7	1.35	50.61	26.26	15.54	6.24	0.25	0.52
8	1.69	54.04	30.72	11.90	1.66	0.20	0.48
9	2.54	25.72	44.58	23.08	4.08	0.34	0.62
10	1.32	26.23	41.91	24.28	6.26	0.36	0.59
11	3.30	36.94	30.60	23.07	6.08	0.32	0.52
12	1.52	38.98	23.86	14.39	21.25	0.39	0.57

Table 59. Grade 5 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.	Item	% Omit	p-value	Item-Total Corr.
1	0.04	0.80	0.47	26	0.04	0.59	0.29
2	0.01	0.72	0.55	27	0.08	0.52	0.43
3	0.01	0.82	0.42	28	0.11	0.68	0.49
4	0.07	0.63	0.38	29	0.17	0.20	0.33
5	0.05	0.65	0.46	30	0.36	0.41	0.43
6	0.50	0.80	0.41	31	1.41	0.19	0.29
7	0.01	0.88	0.42	32	0.07	0.74	0.43
8	0.06	0.75	0.38	33	3.42	0.30	0.32
9	0.08	0.59	0.38	34	0.76	0.34	0.47
10	0.69	0.44	0.42	35	0.44	0.45	0.18
11	0.21	0.72	0.43	36	0.04	0.71	0.24
12	1.52	0.52	0.47	37	0.09	0.84	0.21
13	0.22	0.57	0.34	38	0.07	0.56	0.55
14	0.41	0.46	0.46	39	0.08	0.68	0.42
15	0.06	0.68	0.45	40	0.19	0.74	0.45
16	0.05	0.56	0.47	41	0.07	0.71	0.48
17	2.43	0.85	0.28	42	0.04	0.20	0.42
18	0.23	0.92	0.42	43	0.42	0.34	0.42
19	0.12	0.80	0.45				
20	0.07	0.42	0.24				
21	0.07	0.68	0.29				
22	0.29	0.67	0.43				
23	0.54	0.77	0.47				
24	0.02	0.21	0.40				
25	0.17	0.68	0.45				

Table 60. Grade 5 Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	3	0.83	33.37	39.31	21.38	5.10	0.32	0.57
2	3	0.81	34.82	21.11	34.62	8.64	0.39	0.58
3	2	0.34	27.88	54.57	17.21		0.44	0.53
4	2	0.69	64.59	32.72	2.00		0.18	0.48
5	2	0.20	56.84	39.55	3.41		0.23	0.47
6	2	0.57	19.31	51.87	28.25		0.54	0.47
7	2	0.79	40.47	35.50	23.25		0.41	0.53
8	2	0.71	6.61	55.94	36.75		0.65	0.56
9	2	0.53	41.46	34.98	23.02		0.41	0.48
10	2	0.26	49.34	44.71	5.69		0.28	0.56
11	3	0.80	40.73	29.44	15.05	13.98	0.34	0.66
12	2	0.29	41.83	38.52	19.36		0.39	0.47
13	2	0.49	44.25	44.30	10.96		0.33	0.56
14	2	0.85	34.86	45.75	18.54		0.41	0.61
15	2	1.66	34.60	41.61	22.13		0.43	0.53
16	2	4.43	70.12	7.72	17.74		0.22	0.56
17	2	1.05	48.16	19.79	31.00		0.41	0.62

Table 61. Grade 7 Selected-Response Classical Statistics

Item	% Omit	p-value	Item- Total Corr.
1	0.31	0.59	0.39
2	1.23	0.57	0.39
3	0.60	0.34	0.45
4	0.36	0.42	0.32
5	0.26	0.44	0.36
6	0.04	0.77	0.39
7	0.22	0.46	0.34
8	0.04	0.65	0.49
9	0.05	0.96	0.23
10	0.11	0.57	0.36
11	0.28	0.44	0.43
12	0.44	0.68	0.32
13	0.04	0.42	0.40
14	0.23	0.45	0.37
15	0.46	0.67	0.52
16	0.99	0.65	0.29
17	0.21	0.56	0.26
18	1.14	0.41	0.28
19	1.12	0.45	0.26
20	0.23	0.31	0.31
21	1.23	0.53	0.51
22	0.08	0.59	0.29
23	0.08	0.70	0.33
24	0.07	0.41	0.34
25	0.14	0.39	0.40
26	0.12	0.59	0.47
27	0.16	0.41	0.41
28	0.47	0.66	0.48
29	0.59	0.44	0.25
30	0.28	0.56	0.43
31	0.05	0.57	0.35
32	0.67	0.53	0.20
33	0.08	0.78	0.50
34	0.06	0.65	0.49
35	0.20	0.61	0.52
36	0.15	0.62	0.51

Table 62. Grade 7 Constructed-Response Classical Statistics

Item	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	0.90	17.03	18.08	33.60	30.40	0.59	0.62
2	1.15	15.82	39.54	35.99	7.50	0.45	0.67
3	1.20	6.72	45.63	25.18	21.26	0.53	0.53
4	1.29	30.06	24.64	33.10	10.91	0.41	0.61
5	0.83	19.92	53.34	12.65	13.26	0.39	0.65
6	1.15	21.01	42.39	25.31	10.14	0.41	0.62
7	1.18	29.94	37.99	22.68	8.20	0.36	0.68
8	1.08	38.82	46.21	11.69	2.20	0.25	0.62
9	1.25	10.36	13.26	50.70	24.42	0.63	0.62
10	0.57	13.30	32.63	35.94	17.57	0.52	0.68
11	1.74	31.62	31.03	18.18	17.44	0.40	0.67
12	0.84	24.72	31.36	33.54	9.54	0.42	0.54

Table 63. Grade 8 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.	Item	% Omit	p-value	Item-Total Corr.
1	0.06	0.50	0.30	26	0.16	0.84	0.39
2	0.06	0.50	0.42	27	0.10	0.75	0.46
3	0.60	0.59	0.28	28	0.12	0.56	0.42
4	0.07	0.59	0.43	29	0.11	0.46	0.38
5	0.18	0.18	0.41	30	0.08	0.66	0.38
6	0.25	0.64	0.34	31	0.17	0.52	0.28
7	0.48	0.33	0.49	32	0.05	0.37	0.33
8	0.14	0.85	0.34	33	0.04	0.22	0.54
9	0.05	0.82	0.34	34	0.08	0.55	0.41
10	0.11	0.56	0.31	35	0.32	0.34	0.40
11	0.04	0.72	0.42	36	0.09	0.75	0.37
12	0.28	0.50	0.45	37	0.06	0.67	0.43
13	0.16	0.47	0.31	38	0.58	0.39	0.45
14	0.09	0.47	0.36	39	0.19	0.09	0.37
15	0.14	0.48	0.22	40	0.18	0.47	0.46
16	0.33	0.65	0.43	41	0.21	0.58	0.44
17	0.06	0.41	0.36	42	0.11	0.83	0.35
18	0.09	0.45	0.26				
19	0.27	0.51	0.49				
20	0.84	0.26	0.41				
21	0.72	0.27	0.39				
22	0.30	0.67	0.41				
23	0.08	0.64	0.46				
24	0.10	0.55	0.52				
25	0.17	0.63	0.38				

Table 64. Grade 8 Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	3	0.72	30.54	24.36	23.49	20.88	0.45	0.70
2	2	1.05	44.31	35.17	19.48		0.37	0.64
3	2	0.79	16.70	48.35	34.16		0.58	0.60
4	3	1.03	28.50	27.96	33.44	9.07	0.41	0.67
5	2	1.25	48.02	37.54	13.18		0.32	0.52
6	2	0.54	53.09	18.66	27.71		0.37	0.45
7	2	1.06	42.41	26.13	30.41		0.43	0.51
8	2	1.20	45.45	45.31	8.03		0.31	0.55
9	2	0.42	20.54	56.97	22.07		0.51	0.54
10	2	0.29	19.67	28.70	51.33		0.66	0.55
11	2	1.47	22.76	48.26	27.51		0.52	0.64
12	2	1.00	70.87	12.74	15.39		0.22	0.46
13	2	0.39	48.76	19.30	31.55		0.41	0.54
14	2	1.03	49.39	39.80	9.78		0.30	0.55
15	2	1.62	50.97	36.53	10.88		0.29	0.56
16	3	1.03	28.19	27.11	13.05	30.63	0.48	0.68
17	2	0.89	46.63	33.73	18.75		0.36	0.65