Tables for
CMAS Technical Report
2015–2016

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Table 1. CMAS Subject and Grade Combinations

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

Table 2. Scale Score Ranges

	Partially Met Expectations	Approached Expectation	Met Expectations	Exceeded Expectations
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	0.74	0.67	0.72	0.69	0.90
	7	0.78	0.74	0.71	0.75	0.92
	HS	n/a	n/a	n/a	n/a	n/a
Science	5	0.79	0.85	0.81	0.82	0.93
	8	0.82	0.83	0.84	0.81	0.94
	HS	0.82	0.84	0.86	0.79	0.94

Table 4. Grade 4 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No IEP	19,213	627.75	106.30	300	900	0.90
IEP	2,234	488.95	120.38	300	847	0.88
No Accommodation	17,066	637.02	103.75	300	900	0.89
Accommodation	4,381	520.88	114.37	300	898	0.87
Am. Indian/Alaska Native	156	564.82	118.32	300	900	0.88
Asian	725	640.51	123.95	300	900	0.91
Black	894	555.01	123.63	300	884	0.90
Hispanic	7,304	564.13	110.44	300	900	0.88
White	11,446	647.29	104.56	300	900	0.90
Hawaiian/Pacific Islander	47	598.45	100.89	363	819	0.87
Two or More Races	871	625.68	114.42	300	900	0.90
Missing*	n/a	n/a	n/a	n/a	n/a	n/a
No Economic Disadvantage	11,740	655.92	101.49	300	900	0.89
Economic Disadvantage	9,707	561.74	111.17	300	900	0.88
Female	10,556	620.14	111.19	300	900	0.90
Male	10,891	606.66	119.89	300	900	0.91
Language Proficiency NA	17,012	628.15	112.01	300	900	0.90
Language Proficiency NEP	445	445.51	114.80	300	757	0.84
Language Proficiency LEP	2,770	536.84	98.40	300	865	0.83
Language Proficiency FEP	1,073	640.10	80.66	357	898	0.85
Not Migrant Or Immigrant	21,139	614.73	115.09	300	900	0.90
Migrant	88	525.69	120.58	300	859	0.88
Immigrant	205	514.99	127.71	300	790	0.90
Migrant and Immigrant*	n/a	n/a	n/a	n/a	n/a	n/a

*n-count less than 16

Table 5. Grade 5 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No IEP	55,358	611.14	102.33	300	900	0.92
IEP	6,487	475.50	114.24	300	900	0.92
No Accommodation	50,016	620.25	99.42	300	900	0.92
Accommodation	11,829	498.22	106.54	300	867	0.91
Am. Indian/Alaska Native	443	553.54	113.49	300	847	0.93
Asian	2,031	636.96	109.19	300	900	0.93
Black	2,862	531.17	108.53	300	860	0.92
Hispanic	21,621	545.86	104.77	300	900	0.91
White	32,307	633.40	100.09	300	900	0.92
Hawaiian/Pacific Islander	148	565.80	109.98	300	798	0.92
Two or More Races	2,413	620.39	106.15	300	900	0.93
Missing	20	539.30	101.74	300	691	0.90
No Economic Disadvantage	33,972	639.13	98.37	300	900	0.92
Economic Disadvantage	27,873	545.46	105.13	300	900	0.91
Female	30,183	599.23	107.09	300	900	0.93
Male	31,662	594.70	115.81	300	900	0.93
Language Proficiency NA	48,312	613.67	107.12	300	900	0.93
Language Proficiency NEP	956	431.84	103.55	300	813	0.88
Language Proficiency LEP	6,896	496.33	91.30	300	847	0.87
Language Proficiency FEP	5,184	602.56	80.51	300	900	0.88
Not Migrant Or Immigrant	61,196	597.90	111.24	300	900	0.93
Migrant	177	514.95	100.54	300	777	0.90
Immigrant	439	503.77	116.96	300	850	0.92
Migrant and Immigrant	33	443.82	95.81	300	575	0.83

Table 6. Grade 7 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No IEP	17,836	615.23	102.27	300	900	0.92
IEP	2,050	471.98	110.94	300	899	0.89
No Accommodation	17,332	617.41	101.44	300	900	0.92
Accommodation	2,554	485.46	112.67	300	838	0.89
Am. Indian/Alaska Native	142	582.51	96.10	300	820	0.90
Asian	736	649.15	109.16	300	900	0.93
Black	922	548.64	117.32	300	877	0.91
Hispanic	6,721	555.47	107.12	300	884	0.91
White	10,485	629.13	103.48	300	900	0.92
Hawaiian/Pacific Islander	70	599.89	105.28	300	794	0.92
Two or More Races	799	621.56	110.00	300	900	0.92
Missing*	n/a	n/a	n/a	n/a	n/a	n/a
No Economic Disadvantage	11,284	636.76	100.62	300	900	0.92
Economic Disadvantage	8,602	552.85	108.30	300	870	0.91
Female	9,582	611.71	104.34	300	900	0.92
Male	10,304	590.00	117.75	300	900	0.93
Language Proficiency NA	15,922	612.03	109.32	300	900	0.92
Language Proficiency NEP	279	430.39	107.14	300	775	0.85
Language Proficiency LEP	1,787	504.13	91.54	300	784	0.84
Language Proficiency FEP	1,714	618.91	82.92	300	900	0.89
Not Migrant Or Immigrant	19,698	601.29	111.54	300	900	0.92
Migrant	49	513.90	121.20	300	831	0.90
Immigrant	133	518.32	127.00	300	788	0.92
Migrant and Immigrant*	n/a	n/a	n/a	n/a	n/a	n/a

*n-count less than 16

Table 7. Grade 8 Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No IEP	48,753	597.58	111.58	300	900	0.93
IEP	5,132	454.36	109.01	300	870	0.91
No Accommodation	46,807	601.50	110.38	300	900	0.93
Accommodation	7,078	467.84	108.37	300	898	0.90
Am. Indian/Alaska Native	406	534.73	109.54	300	900	0.92
Asian	1,873	631.64	120.59	300	900	0.94
Black	2,668	522.52	116.91	300	866	0.92
Hispanic	19,096	533.52	112.00	300	900	0.92
White	27,811	620.67	108.43	300	900	0.93
Hawaiian/Pacific Islander	118	573.47	108.78	300	802	0.93
Two or More Races	1,882	604.20	113.68	300	900	0.93
Missing	31	546.10	92.13	300	749	0.90
No Economic Disadvantage	30,377	624.73	108.14	300	900	0.93
Economic Disadvantage	23,508	531.23	111.48	300	900	0.92
Female	25,835	590.14	112.88	300	900	0.93
Male	28,050	578.23	124.12	300	900	0.94
Language Proficiency NA	41,641	600.60	114.94	300	900	0.93
Language Proficiency NEP	888	392.94	93.25	300	729	0.84
Language Proficiency LEP	5,670	475.90	88.83	300	817	0.84
Language Proficiency FEP	5,203	600.91	90.64	300	900	0.90
Not Migrant Or Immigrant	53,248	585.37	118.24	300	900	0.94
Migrant	149	478.04	117.80	300	731	0.91
Immigrant	457	466.53	123.29	300	784	0.93
Migrant and Immigrant	31	361.55	67.27	300	540	0.59

Table 8. HS Science Performance by Subgroups

Subgroup	N	Mean	SD	Min	Max	Alpha
No IEP	31,632	601.46	107.10	300	900	0.94
IEP	2,751	493.86	102.76	300	845	0.90
No Accommodation	31,394	600.84	107.99	300	900	0.94
Accommodation	2,989	508.88	103.47	300	845	0.91
Am. Indian/Alaska Native	263	553.64	102.62	300	809	0.92
Asian	1,056	621.54	117.21	300	900	0.95
Black	1,795	540.23	107.79	300	830	0.92
Hispanic	12,839	556.62	100.57	300	891	0.91
White	17,264	623.34	107.26	300	900	0.94
Hawaiian/Pacific Islander	112	563.17	111.36	300	772	0.92
Two or More Races	1,036	608.75	114.56	300	900	0.94
Missing	18	591.33	100.76	300	713	0.92
No Economic Disadvantage	20,668	617.61	109.06	300	900	0.94
Economic Disadvantage	13,715	555.53	102.32	300	900	0.92
Female	16,427	595.05	104.23	300	900	0.93
Male	17,956	590.83	116.23	300	900	0.94
Language Proficiency NA	26,485	604.17	110.74	300	900	0.94
Language Proficiency NEP	462	454.84	87.99	300	754	0.77
Language Proficiency LEP	2,045	490.57	84.72	300	720	0.82
Language Proficiency FEP	4,908	587.06	88.77	300	900	0.91
Not Migrant Or Immigrant	33,903	593.99	110.41	300	900	0.94
Migrant	106	520.56	98.95	300	777	0.90
Immigrant	349	513.54	100.03	300	808	0.89
Migrant and Immigrant	25	456.32	79.87	300	620	0.76

Table 9. SEMs

Content Area	Grade	SEM
Social Studies	4	35.8
	7	30.9
	HS	n/a
Science	5	29.6
	8	30.1
	HS	27.5

Table 10. Accuracy and Consistency Estimates

Content Area	Grade	Accuracy	Consistency	PChance	Kappa
Social Studies	4	.78	.70	.32	.56
	7	.79	.72	.36	.56
	HS	n/a	n/a	n/a	n/a
Science	5	.81	.74	.31	.62
	8	.82	.76	.32	.65
	HS	.83	.77	.34	.65

Table 11. Accuracy of Cuts

Content Area	Grade	Moderate Command Cut	Strong Command Cut	Distinguished Command Cut
Social Studies	4	.93	.89	.96
	7	.92	.90	.96
	HS	n/a	n/a	n/a
Science	5	.93	.92	.96
	8	.93	.92	.97
	HS	.94	.92	.97

Table 12. Consistency of Cuts

Content Area	Grade	Moderate Command Cut	Strong Command Cut	Distinguished Command Cut
Social Studies	4	.88	.85	.95
	7	.88	.86	.95
	HS	n/a	n/a	n/a
Science	5	.88	.88	.94
	8	.90	.89	.96
	HS	.91	.89	.96

Table 13. Grade 4 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	1,025	79.1	14.0	6.9	0.85	0.01	0.85
2	3	1,027	81.7	18.2	0.1	0.88	0.02	0.88
3	3	1,023	76.2	22.6	1.2	0.81	0.03	0.81
4	3	1,026	78.8	20.7	0.5	0.85	0.01	0.85
5	3	1,013	71.4	27.3	1.3	0.77	0.01	0.77
6	3	1,021	69.3	29.4	1.3	0.79	0	0.79
7	3	1,018	85.1	14.4	0.5	0.91	0.01	0.91
8	3	1,029	74.9	22.0	3.1	0.80	0	0.80
9	3	1,022	74.8	19.0	6.3	0.82	0.01	0.82
10	3	1,025	75.8	23.1	1.1	0.85	0.03	0.85
11	3	1,020	73.9	25.7	0.4	0.88	0.04	0.88
12	3	1,025	72.8	25.3	2.0	0.84	0.02	0.84

Table 14. Grade 5 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	2,986	84.7	14.9	0.4	0.84	0	0.84
2	2	2,988	81.0	18.9	0.1	0.75	0	0.75
3	2	2,994	87.8	12.2	0	0.88	0	0.88
4	2	2,975	84.6	15.3	0.1	0.86	0	0.86
5	2	2,991	83.3	16.4	0.3	0.85	0.02	0.85
6	2	2,993	75.8	23.3	0.8	0.65	0.01	0.65
7	2	2,990	77.2	22.4	0.4	0.76	0.02	0.76
8	2	2,981	80.6	18.2	1.2	0.74	0.02	0.74
9	2	2,980	91.1	8.5	0.5	0.92	0.01	0.92
10	2	2,998	93.8	6.1	0.2	0.96	0	0.96
11	2	2,983	97.0	2.3	0.7	0.74	0	0.74
12	2	2,996	86.5	13.5	0	0.88	0	0.88
13	2	2,985	80.5	18.5	1.0	0.84	0.04	0.84
14	2	2,993	82.6	15.8	1.6	0.76	0	0.76
15	3	2,990	83.9	14.8	1.3	0.90	0.02	0.90
16	3	2,989	70.7	28.5	0.7	0.85	0	0.85
17	3	2,999	69.0	27.3	3.7	0.78	0	0.78

Table 15. Grade 7 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	959	71.3	25.1	3.5	0.75	0	0.75
2	3	963	78.5	20.6	0.9	0.86	0.01	0.86
3	3	961	72.7	25.3	2.0	0.80	0.02	0.80
4	3	950	75.7	23.4	0.9	0.85	0.03	0.85
5	3	963	79.5	17.9	2.6	0.83	0.01	0.83
6	3	957	85.6	13.8	0.6	0.89	0.01	0.89
7	3	961	82.2	15.5	2.3	0.87	0	0.87
8	3	955	69.3	27.2	3.5	0.82	0	0.82
9	3	961	62.6	32.5	4.9	0.73	0	0.73
10	3	960	84.0	9.9	6.1	0.85	0.01	0.85
11	3	952	82.9	14.5	2.6	0.90	0.01	0.90
12	3	962	78.9	19.9	1.2	0.87	0.02	0.87

Table 16. Grade 8 Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	2,577	90.7	9.1	0.2	0.91	0	0.91
2	2	2,570	89.8	9.8	0.4	0.90	0	0.90
3	2	2,582	90.5	9.5	0	0.94	0.01	0.94
4	2	2,574	87.1	12.8	0	0.83	0.01	0.83
5	2	2,578	78.7	21.3	0	0.80	0	0.80
6	2	2,588	90.2	9.8	0	0.89	0	0.89
7	2	2,571	92.1	7.9	0	0.92	0.01	0.92
8	2	2,583	90.5	9.5	0	0.93	0.01	0.93
9	2	2,579	90.5	9.3	0.2	0.91	0.01	0.91
10	2	2,581	90.6	9.2	0.2	0.93	0	0.93
11	2	2,580	89.5	10.5	0	0.91	0	0.91
12	2	2,579	90.4	9.6	0	0.90	0	0.90
13	2	2,580	91.2	8.8	0	0.91	0.01	0.91
14	2	2,573	90.3	9.7	0	0.93	0.01	0.93
15	3	2,571	80.3	18.5	1.2	0.90	0	0.90
16	3	2,568	89.2	10.1	0.7	0.93	0.01	0.93
17	3	2,571	80.8	18.8	0.4	0.92	0	0.92

Table 17. HS Science Operational Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	1,196	83.8	15.8	0.4	0.76	0	0.76
2	2	1,177	90.1	9.4	0.4	0.89	0.03	0.89
3	2	1,239	88.9	10.9	0.2	0.88	0.04	0.88
4	2	1,189	88.3	11.6	0.1	0.68	0.01	0.68
5	2	1,187	85.1	14.8	0.1	0.86	0	0.86
6	2	1,205	81.2	18.8	0.1	0.84	0.01	0.84
7	2	1,188	81.6	17.8	0.5	0.73	0.01	0.73
8	2	1,202	83.4	15.9	0.7	0.67	0	0.67
9	2	1,199	90.2	9.8	0.1	0.93	0.01	0.93
10	2	1,174	81.6	18.4	0	0.74	0.01	0.74
11	2	1,158	83.5	15.8	0.7	0.78	0.02	0.78
12	2	1,194	78.1	21.1	0.8	0.81	0	0.81
13	2	1,211	77.9	20.8	1.3	0.78	0.02	0.78
14	2	1,188	85.4	14.2	0.3	0.80	0.03	0.81
15	3	1,162	75.4	22.5	2.2	0.80	0	0.80
16	3	1,217	85.8	12.8	1.4	0.89	0	0.89
17	3	1,192	79.3	17.1	3.6	0.86	0.01	0.86

Table 18. Grade 4 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	78	84.6	14.1	1.3	0.91	0.06	0.91
2	3	77	79.2	16.9	3.9	0.87	0.11	0.87
3	3	77	90.9	7.8	1.3	0.93	0.03	0.93
4	3	76	77.6	21.1	1.3	0.88	0.05	0.88
5	3	75	74.7	25.3	0	0.89	0.01	0.90
6	3	76	92.1	5.3	2.6	0.94	0.07	0.94
7	3	138	89.1	9.4	1.4	0.89	0.03	0.89
8	3	138	83.3	16.7	0	0.89	0.06	0.89
9	3	137	82.5	16.8	0.7	0.87	0.08	0.87
10	3	138	89.1	10.1	0.7	0.85	0.02	0.85
11	3	142	70.4	28.2	1.4	0.81	0.04	0.82
12	3	145	71.7	26.9	1.4	0.71	0.05	0.71
13	3	143	77.6	19.6	2.8	0.88	0.02	0.88
14	3	144	82.6	14.6	2.8	0.85	0.07	0.86
15	3	205	82.9	15.6	1.5	0.77	0.1	0.78
16	3	204	84.3	14.7	1.0	0.93	0.06	0.93
17	3	204	80.4	17.2	2.5	0.85	0.01	0.85
18	3	205	79.5	20.0	0.5	0.88	0.03	0.88
19	3	121	73.6	24.0	2.5	0.74	0.07	0.74
20	3	139	82.7	15.8	1.4	0.86	0	0.86
21	3	139	79.1	20.1	0.7	0.91	0.02	0.92
22	3	139	83.5	15.8	0.7	0.84	0.04	0.84
23	3	123	79.7	19.5	0.8	0.87	0.07	0.88
24	3	137	82.5	16.8	0.7	0.90	0.02	0.90
25	3	137	81.8	18.2	0	0.90	0.02	0.90
26	3	136	85.3	14.7	0	0.94	0.05	0.94
27	3	135	83.0	16.3	0.7	0.83	0.02	0.83
28	3	136	87.5	11.0	1.5	0.88	0.03	0.88
29	3	136	85.3	14.0	0.7	0.89	0.06	0.89
30	3	136	91.9	8.1	0	0.97	0.02	0.97

Table 19. Grade 5 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	79	92.4	7.6	0	0.92	0.04	0.92
2	2	77	92.2	7.8	0	0.88	0.05	0.88
3	2	80	96.3	2.5	1.3	0.95	0.06	0.95
4	2	79	84.8	13.9	1.3	0.75	0.06	0.75
5	2	78	97.4	2.6	0	0.98	0	0.98
6	2	89	94.4	5.6	0	0.91	0.1	0.92
7	2	88	89.8	10.2	0	0.88	0.05	0.88
8	2	157	93.6	6.4	0	0.95	0.03	0.95
9	2	157	89.8	10.2	0	0.92	0.02	0.92
10	2	124	93.5	6.5	0	0.95	0.04	0.95
11	2	125	90.4	9.6	0	0.93	0	0.93
12	2	98	94.9	4.1	1.0	0.94	0.05	0.94
13	2	132	87.9	12.1	0	0.93	0.02	0.93
14	2	126	92.9	7.1	0	0.95	0.03	0.95
15	2	148	88.5	11.5	0	0.89	0.07	0.89
16	2	154	93.5	6.5	0	0.89	0.02	0.90
17	2	154	93.5	5.8	0.6	0.93	0.04	0.93
18	2	107	82.2	16.8	0.9	0.80	0	0.80
19	2	125	83.2	16.8	0	0.83	0.01	0.83
20	2	127	87.4	10.2	2.4	0.85	0.09	0.86
21	2	119	92.4	7.6	0	0.92	0.01	0.93
22	2	156	84.6	15.4	0	0.86	0.02	0.86
23	2	141	89.4	10.6	0	0.84	0.04	0.85
24	2	87	95.4	4.6	0	0.97	0.03	0.97
25	2	136	82.4	16.9	0.7	0.82	0.03	0.82
26	2	116	81.9	18.1	0	0.85	0.06	0.85
27	2	155	76.8	20.0	3.2	0.74	0.12	0.74
28	2	127	74.8	24.4	0.8	0.71	0.08	0.71
29	2	125	89.6	9.6	0.8	0.90	0.06	0.90
30	2	197	94.9	4.1	1.0	0.82	0.02	0.82
31	2	154	97.4	2.6	0	0.95	0.05	0.96
32	2	157	94.3	5.7	0	0.96	0.02	0.96

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	156	76.3	23.7	0	0.80	0.09	0.80
34	2	154	86.4	13.6	0	0.89	0.07	0.90
35	2	157	85.4	14.6	0	0.75	0.01	0.75
36	2	156	82.7	16.7	0.6	0.83	0.03	0.83
37	3	78	87.2	12.8	0	0.95	0	0.95
38	3	77	83.1	16.9	0	0.92	0.09	0.92
39	3	77	83.1	16.9	0	0.93	0.04	0.93
40	3	77	88.3	11.7	0	0.93	0.01	0.93
41	3	77	89.6	9.1	1.3	0.87	0.02	0.87
42	3	77	74.0	26.0	0	0.90	0	0.90
43	3	76	93.4	6.6	0	0.96	0.04	0.96
44	3	76	82.9	17.1	0	0.89	0.01	0.89
45	3	76	88.2	11.8	0	0.94	0.01	0.94
46	3	77	76.6	22.1	1.3	0.90	0.03	0.90
47	3	76	75.0	21.1	3.9	0.81	0.03	0.81
48	3	77	79.2	19.5	1.3	0.86	0.09	0.87

Table 20. Grade 7 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	3	77	80.5	15.6	3.9	0.85	0.10	0.85
2	3	76	73.7	23.7	2.6	0.83	0.03	0.83
3	3	76	69.7	27.6	2.6	0.83	0.01	0.83
4	3	77	84.4	15.6	0	0.94	0.02	0.94
5	3	92	81.5	18.5	0	0.91	0.01	0.91
6	3	76	78.9	19.7	1.3	0.88	0.04	0.88
7	3	91	73.6	25.3	1.1	0.88	0.07	0.89
8	3	77	77.9	20.8	1.3	0.87	0.03	0.87
9	3	97	76.3	22.7	1.0	0.81	0.02	0.81
10	3	111	75.7	22.5	1.8	0.80	0.03	0.80
11	3	77	76.6	19.5	3.9	0.82	0.01	0.82
12	3	141	78.7	19.9	1.4	0.89	0.01	0.89
13	3	140	79.3	20.0	0.7	0.91	0.04	0.91
14	3	138	73.9	21.0	5.1	0.82	0.02	0.82
15	3	149	80.5	17.4	2.0	0.90	0.05	0.90
16	3	148	81.8	16.9	1.4	0.87	0.02	0.87
17	3	148	71.6	26.4	2.0	0.86	0.04	0.86
18	3	148	70.9	25.7	3.4	0.79	0.07	0.79
19	3	144	71.5	25.7	2.8	0.81	0.03	0.82
20	3	145	71.7	26.2	2.1	0.87	0.02	0.87
21	3	145	72.4	24.1	3.4	0.84	0.06	0.85
22	3	145	71.7	26.2	2.1	0.84	0.07	0.85
23	3	146	77.4	21.2	1.4	0.84	0.05	0.84
24	3	145	82.1	15.2	2.8	0.90	0.07	0.90
25	3	145	81.4	15.9	2.8	0.86	0.09	0.86
26	3	146	71.2	26.0	2.7	0.82	0.05	0.83
27	3	195	76.9	20.0	3.1	0.83	0.02	0.83
28	3	196	70.9	27.6	1.5	0.87	0	0.87
29	3	196	70.4	26.5	3.1	0.70	0.01	0.70
30	3	195	82.1	16.9	1.0	0.89	0.03	0.89
31	3	142	71.8	26.1	2.1	0.74	0.01	0.74
32	3	143	72.7	25.2	2.1	0.85	0.01	0.85

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	3	143	71.3	26.6	2.1	0.85	0.06	0.85
34	3	142	83.8	14.1	2.1	0.89	0.03	0.90

Table 21. Grade 8 Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	78	94.9	5.1	0	0.95	0.04	0.95
2	2	79	87.3	12.7	0	0.86	0	0.86
3	2	125	93.6	6.4	0	0.95	0.02	0.95
4	2	125	98.4	1.6	0	0.99	0	0.99
5	2	77	93.5	6.5	0	0.90	0.07	0.91
6	2	102	94.1	5.9	0	0.92	0	0.92
7	2	85	85.9	14.1	0	0.88	0	0.88
8	2	145	84.1	15.9	0	0.89	0.04	0.89
9	2	82	91.5	8.5	0	0.91	0.05	0.92
10	2	122	91.0	6.6	2.5	0.88	0.02	0.88
11	2	182	86.3	13.7	0	0.88	0.01	0.88
12	2	125	90.4	9.6	0	0.90	0.11	0.91
13	2	79	91.1	8.9	0	0.94	0.04	0.94
14	2	93	89.2	10.8	0	0.90	0.03	0.90
15	2	97	89.7	10.3	0	0.85	0.04	0.85
16	2	121	95.9	4.1	0	0.88	0.02	0.88
17	2	125	98.4	1.6	0	0.96	0.04	0.96
18	2	122	91.0	9.0	0	0.92	0.01	0.92
19	2	102	100	0	0	1	0	1
20	2	122	100	0	0	1	0	1
21	2	126	95.2	4.8	0	0.95	0	0.95
22	2	122	95.9	4.1	0	0.96	0.01	0.96
23	2	116	98.3	1.7	0	0.99	0.02	0.99
24	2	124	96.8	3.2	0	0.97	0.02	0.97
25	2	124	96.0	4.0	0	0.97	0.01	0.97
26	2	152	82.9	17.1	0	0.85	0.05	0.85
27	2	150	90.7	8.7	0.7	0.92	0.05	0.93
28	2	152	85.5	14.5	0	0.86	0.11	0.86
29	2	150	86.7	13.3	0	0.85	0.04	0.85
30	2	152	88.2	11.8	0	0.86	0.04	0.87
31	2	155	91.0	9.0	0	0.92	0.03	0.92
32	2	150	86.7	13.3	0	0.88	0.09	0.89

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	152	92.8	7.2	0	0.93	0.01	0.93
34	2	151	96.7	3.3	0	0.97	0.01	0.97
35	2	151	96.0	4.0	0	0.95	0.02	0.95
36	3	77	96.1	3.9	0	0.98	0.01	0.98
37	3	76	89.5	10.5	0	0.96	0	0.96
38	3	76	88.2	11.8	0	0.93	0.10	0.94
39	3	76	88.2	11.8	0	0.88	0.05	0.89
40	3	77	84.4	13.0	2.6	0.92	0.04	0.92
41	3	77	92.2	7.8	0	0.97	0	0.97
42	3	77	84.4	15.6	0	0.94	0	0.94
43	3	76	84.2	15.8	0	0.90	0.03	0.91
44	3	77	88.3	11.7	0	0.95	0.01	0.95
45	3	77	93.5	6.5	0	0.95	0.02	0.95
46	3	77	94.8	5.2	0	0.96	0.03	0.96
47	3	77	98.7	1.3	0	0.99	0.01	0.99

Table 22. HS Science Field Test Rater Agreement Statistics

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
1	2	82	96.3	2.4	1.2	0.95	0.03	0.95
2	2	85	85.9	14.1	0	0.90	0.06	0.90
3	2	87	88.5	11.5	0	0.92	0.03	0.92
4	2	93	94.6	5.4	0	0.91	0.06	0.91
5	2	94	95.7	4.3	0	0.94	0.03	0.94
6	2	96	92.7	7.3	0	0.90	0.02	0.90
7	2	98	80.6	19.4	0	0.85	0.04	0.85
8	2	81	98.8	1.2	0	0.99	0.02	0.99
9	2	85	90.6	9.4	0	0.94	0	0.94
10	2	93	92.5	7.5	0	0.88	0.02	0.88
11	2	93	84.9	15.1	0	0.86	0.03	0.86
12	2	94	96.8	3.2	0	0.9	0.08	0.91
13	2	93	94.6	5.4	0	0.78	0.09	0.80
14	2	78	85.9	14.1	0	0.81	0.02	0.81
15	2	81	85.2	14.8	0	0.84	0.07	0.84
16	2	92	84.8	15.2	0	0.74	0	0.74
17	2	96	81.3	18.8	0	0.82	0.03	0.82
18	2	94	73.4	26.6	0	0.79	0.09	0.79
19	2	91	86.8	13.2	0	0.77	0.08	0.78
20	2	91	81.3	16.5	2.2	0.52	0.02	0.52
21	2	86	80.2	19.8	0	0.76	0.05	0.77
22	2	97	83.5	16.5	0	0.84	0	0.84
23	2	93	84.9	11.8	3.2	0.84	0.01	0.84
24	2	108	87.0	10.2	2.8	0.87	0.05	0.87
25	2	121	96.7	3.3	0	0.94	0.03	0.94
26	2	99	89.9	10.1	0	0.91	0.03	0.91
27	2	96	86.5	13.5	0	0.86	0.01	0.86
28	2	98	89.8	10.2	0	0.73	0	0.73
29	2	96	91.7	8.3	0	0.93	0	0.93
30	2	98	80.6	17.3	2.0	0.81	0.01	0.81
31	2	97	86.6	13.4	0	0.86	0.05	0.86
32	2	95	85.3	14.7	0	0.81	0.03	0.82

Item	Max Points	N	Exact	Adjacent	Non-Adjacent	Kappa	MD	CORR
33	2	95	95.8	4.2	0	0.88	0	0.88
34	2	98	92.9	7.1	0	0.86	0.02	0.86
35	3	77	88.3	11.7	0	0.93	0.04	0.94
36	3	77	83.1	14.3	2.6	0.88	0.09	0.88
37	3	75	94.7	5.3	0	0.97	0	0.97
38	3	77	76.6	22.1	1.3	0.81	0.02	0.81
39	3	77	97.4	2.6	0	0.99	0.03	0.99
40	3	76	71.1	28.9	0	0.83	0.06	0.83
41	3	76	72.4	22.4	5.3	0.78	0.01	0.78
42	3	77	89.6	9.1	1.3	0.95	0.01	0.95
43	3	77	85.7	14.3	0	0.92	0.09	0.93
44	3	74	78.4	21.6	0	0.89	0.08	0.89

Table 23. N-Count by Form

Form	Grade					
	4	5	7	8	HS SS	HS Sci
Online	20,417	59,610	19,169	51,440	n/a	33,118
Spanish Online	107	262	49	208	n/a	110
Paper	918	1,969	663	2,232	n/a	1,155
Spanish Paper	4	4	1	5	n/a	0
Large Print	0	0	0	0	n/a	0
Braille	1	0	4	0	n/a	0
Total	21,447	61,845	19,886	53,885	n/a	34,383

Table 24. Demographic Distributions

Subgroup	Grade and Subject					
	4 SS	5 Sci	7 SS	8 Sci	11 SS	11 Sci
No IEP	19,213	55,358	17,836	48,753	n/a	31,632
IEP	2,234	6,487	2,050	5,132	n/a	2,751
No Accommodation	17,066	50,016	17,332	46,807	n/a	31,394
Accommodation	4,381	11,829	2,554	7,078	n/a	2,989
Am. Indian/Alaska Native	156	443	142	406	n/a	263
Asian	725	2,031	736	1,873	n/a	1,056
Black	894	2,862	922	2,668	n/a	1,795
Hispanic	7,304	21,621	6,721	19,096	n/a	12,839
White	11,446	32,307	10,485	27,811	n/a	17,264
Hawaiian/Pacific Islander	47	148	70	118	n/a	112
Two or More Races	871	2,413	799	1,882	n/a	1,036
Missing	n/a*	20	n/a*	31	n/a	18
No Economic Disadvantage	11,740	33,972	11,284	30,377	n/a	20,668
Economic Disadvantage	9,707	27,873	8,602	23,508	n/a	13,715
Female	10,556	30,183	9,582	25,835	n/a	16,427
Male	10,891	31,662	10,304	28,050	n/a	17,956
Language Proficiency NA	17,012	48,312	15,922	41,641	n/a	26,485
Language Proficiency NEP	445	956	279	888	n/a	462
Language Proficiency LEP	2,770	6,896	1,787	5,670	n/a	2,045
Language Proficiency FEP	1,073	5,184	1,714	5,203	n/a	4,908
Not Migrant or Immigrant	21,139	61,196	19,698	53,248	n/a	33,903
Migrant	88	177	49	149	n/a	106
Immigrant	205	439	133	457	n/a	349
Migrant and Immigrant	n/a*	30	n/a*	31	n/a	25

*n-count less than 16

Table 25. Grade 4 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	0.591	0.425		0.000	-0.934	0.245	0.689	Yes
2	CR	GPC	1.096	1.050		0.000	1.312	0.196	-1.508	No
3	CR	GPC	1.521	1.259		0.000	1.094	0.179	-1.273	No
4	CR	GPC	0.814	1.411		0.000	1.492	0.077	-1.569	No
5	CR	GPC	0.972	1.064		0.000	1.874	-0.133	-1.741	No
6	CR	GPC	0.907	0.938		0.000	1.456	0.015	-1.470	No
7	CR	GPC	0.629	1.290		0.000	0.998	0.463	-1.460	No
8	CR	GPC	0.990	1.328		0.000	0.502	-0.151	-0.352	No
9	CR	GPC	0.604	0.591		0.000	-0.277	-0.182	0.458	No
10	CR	GPC	0.925	-0.147		0.000	1.672	-0.414	-1.258	No
11	CR	GPC	0.633	0.136		0.000	0.697	-0.002	-0.695	No
12	CR	GPC	0.653	0.606		0.000	1.037	0.672	-1.709	No
13	SR	3PL	1.576	0.311	0.265					No
14	SR	3PL	1.330	-1.178	0.275					No
15	SR	3PL	0.812	1.839	0.317					No
16	SR	3PL	1.184	0.085	0.188					No
17	SR	3PL	2.538	1.389	0.255					No
18	SR	3PL	0.665	0.581	0.172					No
19	SR	3PL	1.410	-0.598	0.115					No
20	SR	3PL	1.830	0.971	0.357					No
21	SR	3PL	1.452	2.120	0.215					No
22	SR	3PL	0.693	1.878	0.310					No
23	SR	3PL	0.785	0.236	0.076					No
24	SR	3PL	1.280	0.551	0.303					No
25	SR	3PL	0.666	0.880	0.054					No
26	SR	3PL	1.610	1.048	0.270					No
27	SR	3PL	0.645	-0.056	0.088					No
28	SR	3PL	1.714	-0.289	0.238					No
29	SR	3PL	1.733	0.822	0.175					No
30	SR	3PL	1.803	1.466	0.294					No
31	SR	3PL	1.713	1.764	0.234					No
32	SR	3PL	1.215	0.825	0.156					No
33	SR	3PL	1.629	1.240	0.300					No
34	SR	3PL	1.245	1.048	0.200					No
35	SR	3PL	0.773	0.208	0.047					No
36	SR	3PL	1.636	1.279	0.160					No
37	XI	2PL	1.387	0.594						No
38	XI	3PL	1.043	2.474	0.182					No
39	XI	3PL	0.857	0.340	0.104					No
40	XI	3PL	1.599	-0.146	0.226					No
41	XI	3PL	1.442	-0.697	0.070					No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	XI	3PL	1.236	0.864	0.198					No
43	XI	3PL	1.060	0.011	0.015					No
44	XI	3PL	1.218	1.400	0.196					No
45	XI	3PL	1.250	-0.104	0.201					No
46	XI	3PL	1.117	-1.530	0.129					No
47	XI	3PL	1.784	1.866	0.236					No
48	XI	3PL	1.247	1.730	0.171					No
49	XI	3PL	1.897	1.568	0.327					No
50	XI	3PL	1.012	-0.930	0.112					No
51	XI	3PL	2.185	0.979	0.225					No

Table 26. Grade 5 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.013	0.180		0.000	1.067	-1.067		No
2	CR	GPC	1.099	-0.745		0.000	1.492	-1.492		No
3	CR	GPC	1.319	0.383		0.000	0.931	-0.931		No
4	CR	GPC	0.851	0.369		0.000	0.906	-0.906		No
5	CR	GPC	1.013	0.892		0.000	0.077	-0.077		No
6	CR	GPC	0.496	2.326		0.000	1.950	-1.950		No
7	CR	GPC	1.069	-0.430		0.000	1.037	-1.037		No
8	CR	GPC	0.698	1.781		0.000	0.026	-0.026		No
9	CR	GPC	0.902	0.070		0.000	0.332	-0.332		No
10	CR	GPC	1.125	-0.413		0.000	-0.170	0.170		No
11	CR	GPC	0.846	3.032		0.000	-1.320	1.320		No
12	CR	GPC	1.515	0.816		0.000	0.362	-0.362		No
13	CR	GPC	0.709	0.030		0.000	-0.076	0.076		No
14	CR	GPC	1.033	1.398		0.000	-0.072	0.072		No
15	CR	GPC	0.743	0.934		0.000	0.466	1.529	-1.996	No
16	CR	GPC	0.628	0.454		0.000	0.829	-0.181	-0.648	No
17	CR	GPC	0.767	0.970		0.000	0.770	-0.045	-0.725	No
18	SR	3PL	2.029	-0.394	0.209					No
19	SR	3PL	1.850	-0.007	0.318					No
20	SR	3PL	1.480	-0.642	0.133					No
21	SR	3PL	1.270	0.469	0.252					No
22	SR	3PL	1.132	0.643	0.056					No
23	SR	3PL	1.874	0.735	0.295					No
24	SR	3PL	1.477	-0.459	0.322					No
25	SR	3PL	1.538	-1.121	0.378					No
26	SR	3PL	0.955	0.971	0.393					No
27	SR	3PL	0.558	-3.197	0.049					No
28	SR	3PL	1.775	0.116	0.102					No
29	SR	3PL	1.183	0.388	0.270					No
30	SR	3PL	1.265	-0.112	0.233					No
31	SR	3PL	1.188	-1.265	0.271					No
32	SR	3PL	1.269	0.196	0.322					No
33	SR	3PL	0.958	0.179	0.206					No
34	SR	3PL	1.289	0.397	0.208					No
35	SR	3PL	1.615	1.141	0.139					No
36	SR	3PL	1.375	1.713	0.347					No
37	SR	3PL	1.391	0.017	0.303					No
38	SR	3PL	1.358	-0.486	0.144					No
39	SR	3PL	1.911	1.162	0.231					No
40	SR	3PL	0.950	-2.247	0.109					No
41	SR	3PL	2.043	-0.086	0.302					No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	SR	3PL	1.720	1.504	0.211					No
43	XI	2PL	1.077	-0.815						No
44	XI	2PL	1.122	-1.192						No
45	XI	2PL	1.283	-1.048						No
46	XI	2PL	1.396	1.159						No
47	XI	2PL	0.843	0.840						No
48	XI	2PL	1.279	-1.541						No
49	XI	2PL	1.541	-0.788						No
50	XI	3PL	1.493	0.171	0.032					No
51	XI	3PL	1.460	0.852	0.049					No
52	XI	3PL	0.330	1.246	0.051					No
53	XI	3PL	0.521	-3.161	0.095					No
54	XI	3PL	1.043	-0.034	0.015					No
55	XI	3PL	1.499	-0.819	0.362					No
56	XI	3PL	1.653	-1.187	0.010					No
57	XI	3PL	1.394	-0.546	0.024					No
58	XI	3PL	1.348	0.176	0.218					No
59	XI	3PL	1.416	-0.337	0.064					No
60	XI	3PL	1.268	-0.729	0.015					No

Table 27. Grade 7 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.223	1.015		0.000	1.072	-0.273	-0.799	No
2	CR	GPC	1.079	-0.387		0.000	0.328	1.236	-1.564	No
3	CR	GPC	1.039	0.263		0.000	1.585	-0.389	-1.196	No
4	CR	GPC	1.024	0.534		0.000	0.803	0.917	-1.721	Yes
5	CR	GPC	0.654	0.660		0.000	1.676	0.511	-2.187	No
6	CR	GPC	1.269	0.323		0.000	1.733	-0.391	-1.342	No
7	CR	GPC	1.004	0.549		0.000	0.999	-0.282	-0.718	Yes
8	CR	GPC	0.825	-0.413		0.000	0.505	0.250	-0.755	No
9	CR	GPC	0.816	0.589		0.000	0.899	0.342	-1.241	No
10	CR	GPC	0.873	-0.257		0.000	-0.290	-0.100	0.390	No
11	CR	GPC	0.813	0.775		0.000	-0.686	0.571	0.115	No
12	CR	GPC	1.302	0.997		0.000	0.635	-0.018	-0.617	No
13	SR	3PL	1.698	0.755	0.357					No
14	SR	3PL	0.831	0.976	0.144					No
15	SR	3PL	1.569	1.015	0.256					No
16	SR	3PL	0.989	1.232	0.097					No
17	SR	3PL	1.187	1.077	0.225					No
18	SR	3PL	1.218	0.469	0.049					No
19	SR	3PL	1.510	0.896	0.246					No
20	SR	3PL	0.762	-0.892	0.146					No
21	SR	3PL	2.104	0.047	0.259					No
22	SR	3PL	1.488	0.952	0.142					No
23	SR	3PL	2.691	0.395	0.315					No
24	SR	3PL	1.565	-0.251	0.161					No
25	SR	3PL	0.873	1.395	0.245					No
26	SR	3PL	1.530	0.361	0.174					No
27	SR	3PL	1.697	0.909	0.370					No
28	SR	3PL	2.415	-0.645	0.216					No
29	SR	3PL	1.576	-0.381	0.137					No
30	SR	3PL	2.515	0.188	0.218					No
31	SR	3PL	2.292	0.145	0.242					No
32	SR	3PL	0.911	0.759	0.182					No
33	SR	3PL	1.097	1.358	0.076					No
34	SR	3PL	2.543	1.563	0.259					Yes
35	SR	3PL	1.197	-0.137	0.367					No
36	XI	2PL	1.125	1.850						No
37	XI	2PL	0.663	-0.863						No
38	XI	2PL	1.391	0.296						No
39	XI	2PL	1.172	-0.119						No
40	XI	2PL	1.485	0.075						No
41	XI	3PL	1.781	0.732	0.350					No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	XI	3PL	1.527	0.876	0.147					No
43	XI	3PL	0.956	0.978	0.006					No
44	XI	3PL	1.379	-0.438	0.116					No
45	XI	3PL	1.572	-0.293	0.147					No
46	XI	3PL	1.361	-1.254	0.262					No
47	XI	3PL	1.954	1.038	0.047					No
48	XI	3PL	1.638	0.209	0.256					No

Table 28. Grade 8 Operational Item Parameter Estimates

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
1	CR	GPC	1.322	0.031		0.000	0.922	-0.922		No
2	CR	GPC	0.772	1.259		0.000	-1.026	1.026		No
3	CR	GPC	0.713	0.371		0.000	-0.630	0.630		Yes
4	CR	GPC	1.536	1.282		0.000	0.503	-0.503		No
5	CR	GPC	0.902	0.018		0.000	1.026	-1.026		No
6	CR	GPC	1.051	1.011		0.000	0.936	-0.936		No
7	CR	GPC	1.233	0.765		0.000	0.704	-0.704		Yes
8	CR	GPC	1.164	0.310		0.000	0.206	-0.206		No
9	CR	GPC	1.309	0.523		0.000	0.552	-0.552		No
10	CR	GPC	0.579	0.821		0.000	-1.108	1.108		No
11	CR	GPC	0.801	0.398		0.000	0.666	-0.666		No
12	CR	GPC	0.728	0.527		0.000	1.113	-1.113		No
13	CR	GPC	0.887	-1.660		0.000	0.378	-0.378		No
14	CR	GPC	0.721	-0.239		0.000	-0.168	0.168		No
15	CR	GPC	1.010	0.101		0.000	0.600	0.029	-0.630	No
16	CR	GPC	1.016	0.493		0.000	1.005	0.547	-1.551	No
17	CR	GPC	1.145	0.498		0.000	-0.080	0.444	-0.364	No
18	SR	3PL	1.420	1.035	0.346					No
19	SR	3PL	1.183	0.113	0.236					No
20	SR	3PL	0.883	-2.050	0.065					No
21	SR	3PL	2.099	0.987	0.320					No
22	SR	3PL	1.329	-0.029	0.303					No
23	SR	3PL	0.857	1.016	0.242					No
24	SR	3PL	1.068	-0.137	0.292					No
25	SR	3PL	1.049	-0.691	0.032					No
26	SR	3PL	1.099	0.827	0.292					No
27	SR	3PL	0.768	0.885	0.086					No
28	SR	3PL	0.967	-1.390	0.036					No
29	SR	3PL	1.538	-0.363	0.303					No
30	SR	3PL	1.169	0.242	0.344					No
31	SR	3PL	1.018	1.203	0.273					No
32	SR	3PL	0.957	1.356	0.125					No
33	SR	3PL	0.612	-0.605	0.188					No
34	SR	3PL	1.260	1.181	0.229					No
35	SR	3PL	1.860	-0.208	0.256					No
36	SR	3PL	1.799	-0.866	0.225					No
37	SR	3PL	1.896	0.654	0.383					No
38	SR	3PL	1.107	0.282	0.231					No
39	SR	3PL	1.365	0.047	0.188					No
40	SR	3PL	0.767	0.100	0.055					No
41	XI	2PL	1.392	1.158						Yes

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	XI	2PL	2.052	0.878						No
43	XI	2PL	0.916	-0.476						No
44	XI	2PL	0.887	0.725						No
45	XI	2PL	1.741	-0.272						No
46	XI	2PL	0.929	-2.334						No
47	XI	2PL	0.699	1.176						No
48	XI	2PL	1.839	-0.096						No
49	XI	2PL	0.773	1.536						No
50	XI	2PL	1.433	1.198						No
51	XI	2PL	1.043	0.907						No
52	XI	3PL	1.248	2.309	0.111					No
53	XI	3PL	1.082	-1.921	0.111					No
54	XI	3PL	0.752	-1.481	0.061					No
55	XI	3PL	1.807	0.390	0.022					No
56	XI	3PL	0.717	0.261	0.000					No
57	XI	3PL	1.367	1.354	0.010					No
58	XI	3PL	0.878	0.481	0.082					No
59	XI	3PL	1.336	-0.856	0.441					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	1.802	1.191		0.000	0.760	-0.760		No
2	CR	GPC	1.117	1.169		0.000	0.140	-0.140		No
3	CR	GPC	1.036	1.214		0.000	0.649	-0.649		No
4	CR	GPC	1.227	2.192		0.000	0.358	-0.358		No
5	CR	GPC	1.189	0.683		0.000	0.590	-0.590		No
6	CR	GPC	1.335	0.646		0.000	0.322	-0.322		No
7	CR	GPC	1.113	1.662		0.000	0.173	-0.173		No
8	CR	GPC	1.243	1.831		0.000	0.638	-0.638		No
9	CR	GPC	0.643	0.711		0.000	-0.773	0.773		No
10	CR	GPC	1.449	1.439		0.000	0.751	-0.751		No
11	CR	GPC	1.193	1.059		0.000	1.027	-1.027		No
12	CR	GPC	1.222	-0.022		0.000	0.445	-0.445		No
13	CR	GPC	1.517	0.329		0.000	0.633	-0.633		No
14	CR	GPC	1.374	1.139		0.000	0.909	-0.909		No
15	CR	GPC	1.198	1.151		0.000	0.983	0.023	-1.006	No
16	CR	GPC	1.191	1.092		0.000	0.615	-0.283	-0.332	No
17	CR	GPC	0.846	0.824		0.000	-0.350	0.653	-0.303	No
18	SR	3PL	1.082	1.771	0.177					No
19	SR	3PL	1.299	-0.930	0.086					No
20	SR	3PL	2.824	1.661	0.364					No
21	SR	3PL	1.540	1.619	0.245					No
22	SR	3PL	1.155	0.609	0.067					No
23	SR	3PL	1.856	0.320	0.068					No
24	SR	3PL	1.662	1.184	0.317					No
25	SR	3PL	1.697	1.270	0.205					No
26	SR	3PL	2.083	0.888	0.079					No
27	SR	3PL	1.537	-0.483	0.126					No
28	SR	3PL	1.614	0.794	0.301					No
29	SR	3PL	1.872	-0.660	0.031					No
30	SR	3PL	1.210	0.466	0.236					No
31	SR	3PL	2.063	1.743	0.234					No
32	SR	3PL	1.437	0.080	0.060					No
33	SR	3PL	1.387	0.182	0.028					No
34	SR	3PL	1.276	-0.616	0.015					No
35	SR	3PL	0.897	0.489	0.012					No
36	SR	3PL	2.141	0.347	0.350					No
37	SR	3PL	1.563	0.718	0.149					No
38	SR	3PL	1.911	1.349	0.175					No
39	SR	3PL	1.293	-0.204	0.172					No
40	SR	3PL	1.074	-0.468	0.016					No
41	SR	3PL	1.639	0.722	0.308					No

Item	Item Type	Model	A	B	C	D1	D2	D3	D4	Misfit Flag
42	SR	3PL	1.273	0.590	0.203					No
43	SR	3PL	1.347	0.478	0.089					No
44	SR	3PL	1.116	-0.641	0.074					No
45	XI	2PL	1.719	-0.826						No
46	XI	2PL	1.149	0.475						No
47	XI	2PL	1.489	0.889						No
48	XI	2PL	0.765	1.153						No
49	XI	2PL	0.960	2.903						No
50	XI	2PL	0.957	2.057						No
51	XI	2PL	0.716	2.726						No
52	XI	2PL	1.832	0.528						No
53	XI	2PL	1.134	1.955						No
54	XI	2PL	1.575	0.697						No
55	XI	2PL	1.479	0.064						No
56	XI	3PL	1.362	0.462	0.208					No
57	XI	3PL	1.611	1.608	0.154					No
58	XI	3PL	2.162	0.686	0.038					No
59	XI	3PL	2.441	0.393	0.008					No
60	XI	3PL	0.859	0.385	0.160					No

Table 30. Grade 4 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	464	2.16	464	2.16	**346**	5	0.02	686	3.20	**391**	13	0.06	1,067	4.98
301	4	0.02	468	2.18	**347**	3	0.01	689	3.21	**392**	15	0.07	1,082	5.04
302	5	0.02	473	2.21	**348**	6	0.03	695	3.24	**393**	14	0.07	1,096	5.11
303	1	0.00	474	2.21	**349**	2	0.01	697	3.25	**394**	8	0.04	1,104	5.15
304	5	0.02	479	2.23	**350**	5	0.02	702	3.27	**395**	7	0.03	1,111	5.18
305	7	0.03	486	2.27	**351**	4	0.02	706	3.29	**396**	6	0.03	1,117	5.21
306	4	0.02	490	2.28	**352**	4	0.02	710	3.31	**397**	10	0.05	1,127	5.25
307	1	0.00	491	2.29	**353**	7	0.03	717	3.34	**398**	19	0.09	1,146	5.34
308	1	0.00	492	2.29	**354**	10	0.05	727	3.39	**399**	8	0.04	1,154	5.38
309	2	0.01	494	2.30	**355**	10	0.05	737	3.44	**400**	10	0.05	1,164	5.43
310	7	0.03	501	2.34	**356**	6	0.03	743	3.46	**401**	15	0.07	1,179	5.50
311	3	0.01	504	2.35	**357**	5	0.02	748	3.49	**402**	8	0.04	1,187	5.53
312	2	0.01	506	2.36	**358**	9	0.04	757	3.53	**403**	11	0.05	1,198	5.59
313	6	0.03	512	2.39	**359**	7	0.03	764	3.56	**404**	13	0.06	1,211	5.65
314	3	0.01	515	2.40	**360**	5	0.02	769	3.59	**405**	11	0.05	1,222	5.70
315	8	0.04	523	2.44	**361**	11	0.05	780	3.64	**406**	13	0.06	1,235	5.76
316	4	0.02	527	2.46	**362**	7	0.03	787	3.67	**407**	11	0.05	1,246	5.81
317	4	0.02	531	2.48	**363**	11	0.05	798	3.72	**408**	12	0.06	1,258	5.87
319	5	0.02	536	2.50	**364**	5	0.02	803	3.74	**409**	13	0.06	1,271	5.93
320	7	0.03	543	2.53	**365**	6	0.03	809	3.77	**410**	7	0.03	1,278	5.96
321	2	0.01	545	2.54	**366**	6	0.03	815	3.80	**411**	10	0.05	1,288	6.01
322	6	0.03	551	2.57	**367**	5	0.02	820	3.82	**412**	14	0.07	1,302	6.07
323	4	0.02	555	2.59	**368**	4	0.02	824	3.84	**413**	11	0.05	1,313	6.12
324	8	0.04	563	2.63	**369**	14	0.07	838	3.91	**414**	11	0.05	1,324	6.17
325	5	0.02	568	2.65	**370**	6	0.03	844	3.94	**415**	16	0.07	1,340	6.25
326	3	0.01	571	2.66	**371**	7	0.03	851	3.97	**416**	12	0.06	1,352	6.30
327	6	0.03	577	2.69	**372**	11	0.05	862	4.02	**417**	16	0.07	1,368	6.38
328	4	0.02	581	2.71	**373**	11	0.05	873	4.07	**418**	23	0.11	1,391	6.49
329	5	0.02	586	2.73	**374**	6	0.03	879	4.10	**419**	20	0.09	1,411	6.58
330	3	0.01	589	2.75	**375**	5	0.02	884	4.12	**420**	19	0.09	1,430	6.67
331	2	0.01	591	2.76	**376**	10	0.05	894	4.17	**421**	10	0.05	1,440	6.71
332	6	0.03	597	2.78	**377**	6	0.03	900	4.20	**422**	23	0.11	1,463	6.82
333	7	0.03	604	2.82	**378**	8	0.04	908	4.23	**423**	15	0.07	1,478	6.89
334	8	0.04	612	2.85	**379**	12	0.06	920	4.29	**424**	19	0.09	1,497	6.98
335	3	0.01	615	2.87	**380**	8	0.04	928	4.33	**425**	15	0.07	1,512	7.05
336	9	0.04	624	2.91	**381**	7	0.03	935	4.36	**426**	25	0.12	1,537	7.17
337	5	0.02	629	2.93	**382**	12	0.06	947	4.42	**427**	19	0.09	1,556	7.26
338	6	0.03	635	2.96	**383**	10	0.05	957	4.46	**428**	15	0.07	1,571	7.33
339	10	0.05	645	3.01	**384**	11	0.05	968	4.51	**429**	13	0.06	1,584	7.39
340	5	0.02	650	3.03	**385**	16	0.07	984	4.59	**430**	19	0.09	1,603	7.47
341	6	0.03	656	3.06	**386**	16	0.07	1,000	4.66	**431**	18	0.08	1,621	7.56
342	8	0.04	664	3.10	**387**	12	0.06	1,012	4.72	**432**	18	0.08	1,639	7.64
343	5	0.02	669	3.12	**388**	13	0.06	1,025	4.78	**433**	22	0.10	1,661	7.74
344	7	0.03	676	3.15	**389**	14	0.07	1,039	4.84	**434**	16	0.07	1,677	7.82
345	5	0.02	681	3.18	**390**	15	0.07	1,054	4.91	**435**	17	0.08	1,694	7.90

Table 30. Grade 4 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
436	12	0.06	1,706	7.95	**481**	43	0.20	2,787	12.99	**526**	40	0.19	4,475	20.87
437	26	0.12	1,732	8.08	**482**	33	0.15	2,820	13.15	**527**	46	0.21	4,521	21.08
438	13	0.06	1,745	8.14	**483**	28	0.13	2,848	13.28	**528**	40	0.19	4,561	21.27
439	25	0.12	1,770	8.25	**484**	37	0.17	2,885	13.45	**529**	46	0.21	4,607	21.48
440	30	0.14	1,800	8.39	**485**	31	0.14	2,916	13.60	**530**	38	0.18	4,645	21.66
441	18	0.08	1,818	8.48	**486**	25	0.12	2,941	13.71	**531**	41	0.19	4,686	21.85
442	19	0.09	1,837	8.57	**487**	25	0.12	2,966	13.83	**532**	52	0.24	4,738	22.09
443	18	0.08	1,855	8.65	**488**	36	0.17	3,002	14.00	**533**	37	0.17	4,775	22.26
444	23	0.11	1,878	8.76	**489**	34	0.16	3,036	14.16	**534**	41	0.19	4,816	22.46
445	17	0.08	1,895	8.84	**490**	34	0.16	3,070	14.31	**535**	47	0.22	4,863	22.67
446	15	0.07	1,910	8.91	**491**	33	0.15	3,103	14.47	**536**	58	0.27	4,921	22.94
447	21	0.10	1,931	9.00	**492**	35	0.16	3,138	14.63	**537**	54	0.25	4,975	23.20
448	14	0.07	1,945	9.07	**493**	45	0.21	3,183	14.84	**538**	51	0.24	5,026	23.43
449	21	0.10	1,966	9.17	**494**	32	0.15	3,215	14.99	**539**	45	0.21	5,071	23.64
450	17	0.08	1,983	9.25	**495**	45	0.21	3,260	15.20	**540**	51	0.24	5,122	23.88
451	31	0.14	2,014	9.39	**496**	35	0.16	3,295	15.36	**541**	64	0.30	5,186	24.18
452	17	0.08	2,031	9.47	**497**	33	0.15	3,328	15.52	**542**	44	0.21	5,230	24.39
453	18	0.08	2,049	9.55	**498**	41	0.19	3,369	15.71	**543**	52	0.24	5,282	24.63
454	16	0.07	2,065	9.63	**499**	32	0.15	3,401	15.86	**544**	59	0.28	5,341	24.90
455	22	0.10	2,087	9.73	**500**	35	0.16	3,436	16.02	**545**	42	0.20	5,383	25.10
456	15	0.07	2,102	9.80	**501**	37	0.17	3,473	16.19	**546**	50	0.23	5,433	25.33
457	26	0.12	2,128	9.92	**502**	41	0.19	3,514	16.38	**547**	50	0.23	5,483	25.57
458	15	0.07	2,143	9.99	**503**	43	0.20	3,557	16.59	**548**	46	0.21	5,529	25.78
459	21	0.10	2,164	10.09	**504**	31	0.14	3,588	16.73	**549**	38	0.18	5,567	25.96
460	20	0.09	2,184	10.18	**505**	41	0.19	3,629	16.92	**550**	38	0.18	5,605	26.13
461	33	0.15	2,217	10.34	**506**	35	0.16	3,664	17.08	**551**	59	0.28	5,664	26.41
462	25	0.12	2,242	10.45	**507**	34	0.16	3,698	17.24	**552**	42	0.20	5,706	26.61
463	19	0.09	2,261	10.54	**508**	57	0.27	3,755	17.51	**553**	46	0.21	5,752	26.82
464	22	0.10	2,283	10.64	**509**	30	0.14	3,785	17.65	**554**	49	0.23	5,801	27.05
465	40	0.19	2,323	10.83	**510**	32	0.15	3,817	17.80	**555**	51	0.24	5,852	27.29
466	29	0.14	2,352	10.97	**511**	32	0.15	3,849	17.95	**556**	56	0.26	5,908	27.55
467	24	0.11	2,376	11.08	**512**	39	0.18	3,888	18.13	**557**	45	0.21	5,953	27.76
468	24	0.11	2,400	11.19	**513**	25	0.12	3,913	18.24	**558**	49	0.23	6,002	27.99
469	28	0.13	2,428	11.32	**514**	45	0.21	3,958	18.45	**559**	63	0.29	6,065	28.28
470	32	0.15	2,460	11.47	**515**	46	0.21	4,004	18.67	**560**	52	0.24	6,117	28.52
471	21	0.10	2,481	11.57	**516**	49	0.23	4,053	18.90	**561**	59	0.28	6,176	28.80
472	33	0.15	2,514	11.72	**517**	43	0.20	4,096	19.10	**562**	52	0.24	6,228	29.04
473	30	0.14	2,544	11.86	**518**	51	0.24	4,147	19.34	**563**	57	0.27	6,285	29.30
474	33	0.15	2,577	12.02	**519**	44	0.21	4,191	19.54	**564**	57	0.27	6,342	29.57
475	30	0.14	2,607	12.16	**520**	40	0.19	4,231	19.73	**565**	61	0.28	6,403	29.85
476	25	0.12	2,632	12.27	**521**	39	0.18	4,270	19.91	**566**	69	0.32	6,472	30.18
477	38	0.18	2,670	12.45	**522**	41	0.19	4,311	20.10	**567**	63	0.29	6,535	30.47
478	25	0.12	2,695	12.57	**523**	44	0.21	4,355	20.31	**568**	58	0.27	6,593	30.74
479	24	0.11	2,719	12.68	**524**	39	0.18	4,394	20.49	**569**	51	0.24	6,644	30.98
480	25	0.12	2,744	12.79	**525**	41	0.19	4,435	20.68	**570**	63	0.29	6,707	31.27

Table 30. Grade 4 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
571	66	0.31	6,773	31.58	**616**	77	0.36	10,004	46.65	**661**	85	0.40	13,534	63.10
572	65	0.30	6,838	31.88	**617**	75	0.35	10,079	46.99	**662**	74	0.35	13,608	63.45
573	73	0.34	6,911	32.22	**618**	61	0.28	10,140	47.28	**663**	78	0.36	13,686	63.81
574	57	0.27	6,968	32.49	**619**	72	0.34	10,212	47.62	**664**	91	0.42	13,777	64.24
575	74	0.35	7,042	32.83	**620**	86	0.40	10,298	48.02	**665**	79	0.37	13,856	64.61
576	69	0.32	7,111	33.16	**621**	84	0.39	10,382	48.41	**666**	78	0.36	13,934	64.97
577	74	0.35	7,185	33.50	**622**	95	0.44	10,477	48.85	**667**	77	0.36	14,011	65.33
578	66	0.31	7,251	33.81	**623**	85	0.40	10,562	49.25	**668**	73	0.34	14,084	65.67
579	88	0.41	7,339	34.22	**624**	76	0.35	10,638	49.60	**669**	78	0.36	14,162	66.03
580	58	0.27	7,397	34.49	**625**	61	0.28	10,699	49.89	**670**	84	0.39	14,246	66.42
581	77	0.36	7,474	34.85	**626**	66	0.31	10,765	50.19	**671**	78	0.36	14,324	66.79
582	69	0.32	7,543	35.17	**627**	79	0.37	10,844	50.56	**672**	62	0.29	14,386	67.08
583	79	0.37	7,622	35.54	**628**	86	0.40	10,930	50.96	**673**	80	0.37	14,466	67.45
584	61	0.28	7,683	35.82	**629**	71	0.33	11,001	51.29	**674**	57	0.27	14,523	67.72
585	55	0.26	7,738	36.08	**630**	79	0.37	11,080	51.66	**675**	84	0.39	14,607	68.11
586	64	0.30	7,802	36.38	**631**	69	0.32	11,149	51.98	**676**	76	0.35	14,683	68.46
587	78	0.36	7,880	36.74	**632**	100	0.47	11,249	52.45	**677**	78	0.36	14,761	68.83
588	58	0.27	7,938	37.01	**633**	83	0.39	11,332	52.84	**678**	78	0.36	14,839	69.19
589	87	0.41	8,025	37.42	**634**	88	0.41	11,420	53.25	**679**	82	0.38	14,921	69.57
590	62	0.29	8,087	37.71	**635**	71	0.33	11,491	53.58	**680**	79	0.37	15,000	69.94
591	68	0.32	8,155	38.02	**636**	80	0.37	11,571	53.95	**681**	74	0.35	15,074	70.28
592	76	0.35	8,231	38.38	**637**	84	0.39	11,655	54.34	**682**	83	0.39	15,157	70.67
593	60	0.28	8,291	38.66	**638**	78	0.36	11,733	54.71	**683**	62	0.29	15,219	70.96
594	63	0.29	8,354	38.95	**639**	86	0.40	11,819	55.11	**684**	89	0.41	15,308	71.38
595	83	0.39	8,437	39.34	**640**	59	0.28	11,878	55.38	**685**	84	0.39	15,392	71.77
596	89	0.41	8,526	39.75	**641**	68	0.32	11,946	55.70	**686**	89	0.41	15,481	72.18
597	67	0.31	8,593	40.07	**642**	74	0.35	12,020	56.05	**687**	60	0.28	15,541	72.46
598	83	0.39	8,676	40.45	**643**	82	0.38	12,102	56.43	**688**	84	0.39	15,625	72.85
599	71	0.33	8,747	40.78	**644**	67	0.31	12,169	56.74	**689**	82	0.38	15,707	73.24
600	65	0.30	8,812	41.09	**645**	77	0.36	12,246	57.10	**690**	68	0.32	15,775	73.55
601	69	0.32	8,881	41.41	**646**	77	0.36	12,323	57.46	**691**	71	0.33	15,846	73.88
602	79	0.37	8,960	41.78	**647**	83	0.39	12,406	57.84	**692**	68	0.32	15,914	74.20
603	70	0.33	9,030	42.10	**648**	81	0.38	12,487	58.22	**693**	80	0.37	15,994	74.57
604	69	0.32	9,099	42.43	**649**	73	0.34	12,560	58.56	**694**	77	0.36	16,071	74.93
605	68	0.32	9,167	42.74	**650**	72	0.34	12,632	58.90	**695**	63	0.29	16,134	75.23
606	75	0.35	9,242	43.09	**651**	91	0.42	12,723	59.32	**696**	77	0.36	16,211	75.59
607	69	0.32	9,311	43.41	**652**	75	0.35	12,798	59.67	**697**	65	0.30	16,276	75.89
608	91	0.42	9,402	43.84	**653**	95	0.44	12,893	60.12	**698**	68	0.32	16,344	76.21
609	56	0.26	9,458	44.10	**654**	80	0.37	12,973	60.49	**699**	72	0.34	16,416	76.54
610	63	0.29	9,521	44.39	**655**	85	0.40	13,058	60.88	**700**	65	0.30	16,481	76.85
611	68	0.32	9,589	44.71	**656**	80	0.37	13,138	61.26	**701**	83	0.39	16,564	77.23
612	94	0.44	9,683	45.15	**657**	79	0.37	13,217	61.63	**702**	57	0.27	16,621	77.50
613	83	0.39	9,766	45.54	**658**	70	0.33	13,287	61.95	**703**	68	0.32	16,689	77.82
614	93	0.43	9,859	45.97	**659**	85	0.40	13,372	62.35	**704**	73	0.34	16,762	78.16
615	68	0.32	9,927	46.29	**660**	77	0.36	13,449	62.71	**705**	59	0.28	16,821	78.43

Table 30. Grade 4 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
706	58	0.27	16,879	78.70	**751**	43	0.20	19,366	90.30	**796**	23	0.11	20,766	96.82
707	63	0.29	16,942	78.99	**752**	37	0.17	19,403	90.47	**797**	18	0.08	20,784	96.91
708	63	0.29	17,005	79.29	**753**	46	0.21	19,449	90.68	**798**	21	0.10	20,805	97.01
709	47	0.22	17,052	79.51	**754**	36	0.17	19,485	90.85	**799**	8	0.04	20,813	97.04
710	64	0.30	17,116	79.81	**755**	42	0.20	19,527	91.05	**800**	17	0.08	20,830	97.12
711	68	0.32	17,184	80.12	**756**	33	0.15	19,560	91.20	**801**	17	0.08	20,847	97.20
712	60	0.28	17,244	80.40	**757**	42	0.20	19,602	91.40	**802**	11	0.05	20,858	97.25
713	52	0.24	17,296	80.65	**758**	27	0.13	19,629	91.52	**803**	13	0.06	20,871	97.31
714	76	0.35	17,372	81.00	**759**	36	0.17	19,665	91.69	**804**	17	0.08	20,888	97.39
715	56	0.26	17,428	81.26	**760**	44	0.21	19,709	91.90	**805**	17	0.08	20,905	97.47
716	66	0.31	17,494	81.57	**761**	45	0.21	19,754	92.11	**806**	24	0.11	20,929	97.58
717	67	0.31	17,561	81.88	**762**	39	0.18	19,793	92.29	**807**	12	0.06	20,941	97.64
718	57	0.27	17,618	82.15	**763**	35	0.16	19,828	92.45	**808**	17	0.08	20,958	97.72
719	53	0.25	17,671	82.39	**764**	32	0.15	19,860	92.60	**809**	8	0.04	20,966	97.76
720	64	0.30	17,735	82.69	**765**	36	0.17	19,896	92.77	**810**	10	0.05	20,976	97.80
721	68	0.32	17,803	83.01	**766**	31	0.14	19,927	92.91	**811**	11	0.05	20,987	97.86
722	57	0.27	17,860	83.28	**767**	35	0.16	19,962	93.08	**812**	12	0.06	20,999	97.91
723	56	0.26	17,916	83.54	**768**	36	0.17	19,998	93.24	**813**	19	0.09	21,018	98.00
724	61	0.28	17,977	83.82	**769**	38	0.18	20,036	93.42	**814**	12	0.06	21,030	98.06
725	49	0.23	18,026	84.05	**770**	31	0.14	20,067	93.57	**815**	6	0.03	21,036	98.08
726	59	0.28	18,085	84.32	**771**	30	0.14	20,097	93.71	**816**	8	0.04	21,044	98.12
727	69	0.32	18,154	84.65	**772**	26	0.12	20,123	93.83	**817**	2	0.01	21,046	98.13
728	66	0.31	18,220	84.95	**773**	27	0.13	20,150	93.95	**818**	9	0.04	21,055	98.17
729	57	0.27	18,277	85.22	**774**	34	0.16	20,184	94.11	**819**	10	0.05	21,065	98.22
730	60	0.28	18,337	85.50	**775**	25	0.12	20,209	94.23	**820**	8	0.04	21,073	98.26
731	61	0.28	18,398	85.78	**776**	41	0.19	20,250	94.42	**821**	11	0.05	21,084	98.31
732	64	0.30	18,462	86.08	**777**	36	0.17	20,286	94.59	**822**	12	0.06	21,096	98.36
733	57	0.27	18,519	86.35	**778**	31	0.14	20,317	94.73	**823**	8	0.04	21,104	98.40
734	37	0.17	18,556	86.52	**779**	26	0.12	20,343	94.85	**824**	10	0.05	21,114	98.45
735	70	0.33	18,626	86.85	**780**	27	0.13	20,370	94.98	**825**	7	0.03	21,121	98.48
736	39	0.18	18,665	87.03	**781**	26	0.12	20,396	95.10	**826**	8	0.04	21,129	98.52
737	45	0.21	18,710	87.24	**782**	35	0.16	20,431	95.26	**827**	6	0.03	21,135	98.55
738	63	0.29	18,773	87.53	**783**	23	0.11	20,454	95.37	**828**	9	0.04	21,144	98.59
739	56	0.26	18,829	87.79	**784**	17	0.08	20,471	95.45	**829**	13	0.06	21,157	98.65
740	43	0.20	18,872	87.99	**785**	27	0.13	20,498	95.58	**830**	9	0.04	21,166	98.69
741	43	0.20	18,915	88.19	**786**	30	0.14	20,528	95.72	**831**	9	0.04	21,175	98.73
742	57	0.27	18,972	88.46	**787**	21	0.10	20,549	95.81	**832**	9	0.04	21,184	98.77
743	47	0.22	19,019	88.68	**788**	24	0.11	20,573	95.92	**833**	12	0.06	21,196	98.83
744	40	0.19	19,059	88.87	**789**	33	0.15	20,606	96.08	**834**	9	0.04	21,205	98.87
745	61	0.28	19,120	89.15	**790**	27	0.13	20,633	96.20	**835**	9	0.04	21,214	98.91
746	35	0.16	19,155	89.31	**791**	23	0.11	20,656	96.31	**836**	7	0.03	21,221	98.95
747	41	0.19	19,196	89.50	**792**	24	0.11	20,680	96.42	**837**	7	0.03	21,228	98.98
748	44	0.21	19,240	89.71	**793**	28	0.13	20,708	96.55	**838**	5	0.02	21,233	99.00
749	44	0.21	19,284	89.91	**794**	20	0.09	20,728	96.65	**839**	3	0.01	21,236	99.02
750	39	0.18	19,323	90.10	**795**	15	0.07	20,743	96.72	**840**	10	0.05	21,246	99.06

Table 30. Grade 4 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
841	9	0.04	21,255	99.10	**889**	3	0.01	21,407	99.81
842	5	0.02	21,260	99.13	**890**	1	0.00	21,408	99.82
843	1	0.00	21,261	99.13	**891**	1	0.00	21,409	99.82
844	8	0.04	21,269	99.17	**893**	1	0.00	21,410	99.83
845	9	0.04	21,278	99.21	**894**	2	0.01	21,412	99.84
846	7	0.03	21,285	99.24	**895**	2	0.01	21,414	99.85
847	8	0.04	21,293	99.28	**898**	3	0.01	21,417	99.86
848	5	0.02	21,298	99.31	**899**	2	0.01	21,419	99.87
849	3	0.01	21,301	99.32	**900**	28	0.13	21,447	100.00
850	5	0.02	21,306	99.34					
851	6	0.03	21,312	99.37					
852	1	0.00	21,313	99.38					
853	7	0.03	21,320	99.41					
854	3	0.01	21,323	99.42					
855	3	0.01	21,326	99.44					
856	4	0.02	21,330	99.45					
857	7	0.03	21,337	99.49					
858	4	0.02	21,341	99.51					
859	7	0.03	21,348	99.54					
860	1	0.00	21,349	99.54					
861	3	0.01	21,352	99.56					
862	2	0.01	21,354	99.57					
863	2	0.01	21,356	99.58					
864	4	0.02	21,360	99.59					
865	5	0.02	21,365	99.62					
866	1	0.00	21,366	99.62					
867	2	0.01	21,368	99.63					
868	1	0.00	21,369	99.64					
869	1	0.00	21,370	99.64					
870	1	0.00	21,371	99.65					
871	4	0.02	21,375	99.66					
872	3	0.01	21,378	99.68					
873	1	0.00	21,379	99.68					
874	1	0.00	21,380	99.69					
875	3	0.01	21,383	99.70					
877	2	0.01	21,385	99.71					
878	3	0.01	21,388	99.72					
879	2	0.01	21,390	99.73					
880	2	0.01	21,392	99.74					
881	4	0.02	21,396	99.76					
882	1	0.00	21,397	99.77					
883	3	0.01	21,400	99.78					
884	1	0.00	21,401	99.79					
885	1	0.00	21,402	99.79					
886	2	0.01	21,404	99.80					

Table 31. Grade 5 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,043	1.69	1,043	1.69	**345**	20	0.03	1,702	2.75	**390**	45	0.07	3,011	4.87
301	7	0.01	1,050	1.70	**346**	20	0.03	1,722	2.78	**391**	32	0.05	3,043	4.92
302	14	0.02	1,064	1.72	**347**	20	0.03	1,742	2.82	**392**	38	0.06	3,081	4.98
303	9	0.01	1,073	1.73	**348**	16	0.03	1,758	2.84	**393**	37	0.06	3,118	5.04
304	15	0.02	1,088	1.76	**349**	26	0.04	1,784	2.88	**394**	30	0.05	3,148	5.09
305	17	0.03	1,105	1.79	**350**	30	0.05	1,814	2.93	**395**	38	0.06	3,186	5.15
306	10	0.02	1,115	1.80	**351**	23	0.04	1,837	2.97	**396**	39	0.06	3,225	5.21
307	12	0.02	1,127	1.82	**352**	28	0.05	1,865	3.02	**397**	41	0.07	3,266	5.28
308	9	0.01	1,136	1.84	**353**	26	0.04	1,891	3.06	**398**	31	0.05	3,297	5.33
309	12	0.02	1,148	1.86	**354**	17	0.03	1,908	3.09	**399**	39	0.06	3,336	5.39
310	11	0.02	1,159	1.87	**355**	30	0.05	1,938	3.13	**400**	40	0.06	3,376	5.46
311	8	0.01	1,167	1.89	**356**	27	0.04	1,965	3.18	**401**	33	0.05	3,409	5.51
312	15	0.02	1,182	1.91	**357**	27	0.04	1,992	3.22	**402**	47	0.08	3,456	5.59
313	13	0.02	1,195	1.93	**358**	29	0.05	2,021	3.27	**403**	45	0.07	3,501	5.66
314	13	0.02	1,208	1.95	**359**	19	0.03	2,040	3.30	**404**	45	0.07	3,546	5.73
315	12	0.02	1,220	1.97	**360**	26	0.04	2,066	3.34	**405**	42	0.07	3,588	5.80
316	13	0.02	1,233	1.99	**361**	25	0.04	2,091	3.38	**406**	49	0.08	3,637	5.88
317	15	0.02	1,248	2.02	**362**	21	0.03	2,112	3.41	**407**	40	0.06	3,677	5.95
318	14	0.02	1,262	2.04	**363**	25	0.04	2,137	3.46	**408**	43	0.07	3,720	6.02
319	8	0.01	1,270	2.05	**364**	36	0.06	2,173	3.51	**409**	54	0.09	3,774	6.10
320	17	0.03	1,287	2.08	**365**	35	0.06	2,208	3.57	**410**	50	0.08	3,824	6.18
321	15	0.02	1,302	2.11	**366**	30	0.05	2,238	3.62	**411**	41	0.07	3,865	6.25
322	19	0.03	1,321	2.14	**367**	16	0.03	2,254	3.64	**412**	46	0.07	3,911	6.32
323	17	0.03	1,338	2.16	**368**	24	0.04	2,278	3.68	**413**	39	0.06	3,950	6.39
324	13	0.02	1,351	2.18	**369**	32	0.05	2,310	3.74	**414**	46	0.07	3,996	6.46
325	22	0.04	1,373	2.22	**370**	17	0.03	2,327	3.76	**415**	56	0.09	4,052	6.55
326	21	0.03	1,394	2.25	**371**	26	0.04	2,353	3.80	**416**	49	0.08	4,101	6.63
327	7	0.01	1,401	2.27	**372**	27	0.04	2,380	3.85	**417**	55	0.09	4,156	6.72
328	8	0.01	1,409	2.28	**373**	33	0.05	2,413	3.90	**418**	51	0.08	4,207	6.80
329	19	0.03	1,428	2.31	**374**	33	0.05	2,446	3.96	**419**	47	0.08	4,254	6.88
330	23	0.04	1,451	2.35	**375**	32	0.05	2,478	4.01	**420**	60	0.10	4,314	6.98
331	18	0.03	1,469	2.38	**376**	33	0.05	2,511	4.06	**421**	67	0.11	4,381	7.08
332	22	0.04	1,491	2.41	**377**	41	0.07	2,552	4.13	**422**	59	0.10	4,440	7.18
333	10	0.02	1,501	2.43	**378**	36	0.06	2,588	4.18	**423**	50	0.08	4,490	7.26
334	19	0.03	1,520	2.46	**379**	28	0.05	2,616	4.23	**424**	66	0.11	4,556	7.37
335	15	0.02	1,535	2.48	**380**	25	0.04	2,641	4.27	**425**	48	0.08	4,604	7.44
336	16	0.03	1,551	2.51	**381**	41	0.07	2,682	4.34	**426**	66	0.11	4,670	7.55
337	15	0.02	1,566	2.53	**382**	35	0.06	2,717	4.39	**427**	55	0.09	4,725	7.64
338	14	0.02	1,580	2.55	**383**	30	0.05	2,747	4.44	**428**	59	0.10	4,784	7.74
339	22	0.04	1,602	2.59	**384**	32	0.05	2,779	4.49	**429**	59	0.10	4,843	7.83
340	12	0.02	1,614	2.61	**385**	37	0.06	2,816	4.55	**430**	57	0.09	4,900	7.92
341	17	0.03	1,631	2.64	**386**	33	0.05	2,849	4.61	**431**	70	0.11	4,970	8.04
342	17	0.03	1,648	2.66	**387**	43	0.07	2,892	4.68	**432**	52	0.08	5,022	8.12
343	18	0.03	1,666	2.69	**388**	33	0.05	2,925	4.73	**433**	67	0.11	5,089	8.23
344	16	0.03	1,682	2.72	**389**	41	0.07	2,966	4.80	**434**	64	0.10	5,153	8.33

Table 31. 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	5,222	8.44	**480**	110	0.18	9,039	14.62	**525**	161	0.26	14,901	24.09
436	66	0.11	5,288	8.55	**481**	115	0.19	9,154	14.80	**526**	147	0.24	15,048	24.33
437	64	0.10	5,352	8.65	**482**	96	0.16	9,250	14.96	**527**	161	0.26	15,209	24.59
438	74	0.12	5,426	8.77	**483**	105	0.17	9,355	15.13	**528**	178	0.29	15,387	24.88
439	56	0.09	5,482	8.86	**484**	110	0.18	9,465	15.30	**529**	164	0.27	15,551	25.15
440	64	0.10	5,546	8.97	**485**	105	0.17	9,570	15.47	**530**	166	0.27	15,717	25.41
441	64	0.10	5,610	9.07	**486**	113	0.18	9,683	15.66	**531**	179	0.29	15,896	25.70
442	64	0.10	5,674	9.17	**487**	114	0.18	9,797	15.84	**532**	180	0.29	16,076	25.99
443	62	0.10	5,736	9.27	**488**	124	0.20	9,921	16.04	**533**	182	0.29	16,258	26.29
444	63	0.10	5,799	9.38	**489**	120	0.19	10,041	16.24	**534**	166	0.27	16,424	26.56
445	83	0.13	5,882	9.51	**490**	121	0.20	10,162	16.43	**535**	205	0.33	16,629	26.89
446	73	0.12	5,955	9.63	**491**	138	0.22	10,300	16.65	**536**	191	0.31	16,820	27.20
447	90	0.15	6,045	9.77	**492**	131	0.21	10,431	16.87	**537**	182	0.29	17,002	27.49
448	79	0.13	6,124	9.90	**493**	111	0.18	10,542	17.05	**538**	159	0.26	17,161	27.75
449	93	0.15	6,217	10.05	**494**	133	0.22	10,675	17.26	**539**	182	0.29	17,343	28.04
450	76	0.12	6,293	10.18	**495**	122	0.20	10,797	17.46	**540**	182	0.29	17,525	28.34
451	85	0.14	6,378	10.31	**496**	129	0.21	10,926	17.67	**541**	165	0.27	17,690	28.60
452	89	0.14	6,467	10.46	**497**	115	0.19	11,041	17.85	**542**	191	0.31	17,881	28.91
453	66	0.11	6,533	10.56	**498**	114	0.18	11,155	18.04	**543**	172	0.28	18,053	29.19
454	68	0.11	6,601	10.67	**499**	121	0.20	11,276	18.23	**544**	188	0.30	18,241	29.49
455	97	0.16	6,698	10.83	**500**	144	0.23	11,420	18.47	**545**	172	0.28	18,413	29.77
456	76	0.12	6,774	10.95	**501**	130	0.21	11,550	18.68	**546**	172	0.28	18,585	30.05
457	73	0.12	6,847	11.07	**502**	134	0.22	11,684	18.89	**547**	160	0.26	18,745	30.31
458	87	0.14	6,934	11.21	**503**	125	0.20	11,809	19.09	**548**	197	0.32	18,942	30.63
459	82	0.13	7,016	11.34	**504**	119	0.19	11,928	19.29	**549**	214	0.35	19,156	30.97
460	63	0.10	7,079	11.45	**505**	130	0.21	12,058	19.50	**550**	213	0.34	19,369	31.32
461	84	0.14	7,163	11.58	**506**	133	0.22	12,191	19.71	**551**	200	0.32	19,569	31.64
462	80	0.13	7,243	11.71	**507**	142	0.23	12,333	19.94	**552**	168	0.27	19,737	31.91
463	84	0.14	7,327	11.85	**508**	136	0.22	12,469	20.16	**553**	193	0.31	19,930	32.23
464	89	0.14	7,416	11.99	**509**	116	0.19	12,585	20.35	**554**	180	0.29	20,110	32.52
465	76	0.12	7,492	12.11	**510**	114	0.18	12,699	20.53	**555**	170	0.27	20,280	32.79
466	110	0.18	7,602	12.29	**511**	142	0.23	12,841	20.76	**556**	201	0.33	20,481	33.12
467	96	0.16	7,698	12.45	**512**	139	0.22	12,980	20.99	**557**	216	0.35	20,697	33.47
468	101	0.16	7,799	12.61	**513**	157	0.25	13,137	21.24	**558**	190	0.31	20,887	33.77
469	112	0.18	7,911	12.79	**514**	166	0.27	13,303	21.51	**559**	214	0.35	21,101	34.12
470	107	0.17	8,018	12.96	**515**	150	0.24	13,453	21.75	**560**	178	0.29	21,279	34.41
471	102	0.16	8,120	13.13	**516**	131	0.21	13,584	21.96	**561**	190	0.31	21,469	34.71
472	101	0.16	8,221	13.29	**517**	129	0.21	13,713	22.17	**562**	214	0.35	21,683	35.06
473	95	0.15	8,316	13.45	**518**	144	0.23	13,857	22.41	**563**	219	0.35	21,902	35.41
474	101	0.16	8,417	13.61	**519**	125	0.20	13,982	22.61	**564**	221	0.36	22,123	35.77
475	96	0.16	8,513	13.77	**520**	149	0.24	14,131	22.85	**565**	196	0.32	22,319	36.09
476	106	0.17	8,619	13.94	**521**	178	0.29	14,309	23.14	**566**	209	0.34	22,528	36.43
477	109	0.18	8,728	14.11	**522**	134	0.22	14,443	23.35	**567**	198	0.32	22,726	36.75
478	101	0.16	8,829	14.28	**523**	145	0.23	14,588	23.59	**568**	229	0.37	22,955	37.12
479	100	0.16	8,929	14.44	**524**	152	0.25	14,740	23.83	**569**	206	0.33	23,161	37.45

Table 31. 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	226	0.37	23,387	37.82	**615**	214	0.35	33,354	53.93	**660**	222	0.36	43,487	70.32
571	222	0.36	23,609	38.17	**616**	235	0.38	33,589	54.31	**661**	205	0.33	43,692	70.65
572	225	0.36	23,834	38.54	**617**	236	0.38	33,825	54.69	**662**	223	0.36	43,915	71.01
573	220	0.36	24,054	38.89	**618**	224	0.36	34,049	55.06	**663**	173	0.28	44,088	71.29
574	210	0.34	24,264	39.23	**619**	233	0.38	34,282	55.43	**664**	215	0.35	44,303	71.64
575	195	0.32	24,459	39.55	**620**	243	0.39	34,525	55.83	**665**	218	0.35	44,521	71.99
576	211	0.34	24,670	39.89	**621**	243	0.39	34,768	56.22	**666**	217	0.35	44,738	72.34
577	240	0.39	24,910	40.28	**622**	238	0.38	35,006	56.60	**667**	190	0.31	44,928	72.65
578	206	0.33	25,116	40.61	**623**	169	0.27	35,175	56.88	**668**	206	0.33	45,134	72.98
579	211	0.34	25,327	40.95	**624**	212	0.34	35,387	57.22	**669**	195	0.32	45,329	73.29
580	207	0.33	25,534	41.29	**625**	228	0.37	35,615	57.59	**670**	189	0.31	45,518	73.60
581	227	0.37	25,761	41.65	**626**	238	0.38	35,853	57.97	**671**	180	0.29	45,698	73.89
582	228	0.37	25,989	42.02	**627**	222	0.36	36,075	58.33	**672**	211	0.34	45,909	74.23
583	209	0.34	26,198	42.36	**628**	235	0.38	36,310	58.71	**673**	193	0.31	46,102	74.54
584	204	0.33	26,402	42.69	**629**	237	0.38	36,547	59.09	**674**	192	0.31	46,294	74.85
585	222	0.36	26,624	43.05	**630**	220	0.36	36,767	59.45	**675**	184	0.30	46,478	75.15
586	218	0.35	26,842	43.40	**631**	228	0.37	36,995	59.82	**676**	192	0.31	46,670	75.46
587	215	0.35	27,057	43.75	**632**	244	0.39	37,239	60.21	**677**	209	0.34	46,879	75.80
588	218	0.35	27,275	44.10	**633**	195	0.32	37,434	60.53	**678**	183	0.30	47,062	76.10
589	210	0.34	27,485	44.44	**634**	239	0.39	37,673	60.92	**679**	192	0.31	47,254	76.41
590	204	0.33	27,689	44.77	**635**	215	0.35	37,888	61.26	**680**	185	0.30	47,439	76.71
591	227	0.37	27,916	45.14	**636**	216	0.35	38,104	61.61	**681**	210	0.34	47,649	77.05
592	220	0.36	28,136	45.49	**637**	212	0.34	38,316	61.95	**682**	200	0.32	47,849	77.37
593	234	0.38	28,370	45.87	**638**	205	0.33	38,521	62.29	**683**	177	0.29	48,026	77.66
594	191	0.31	28,561	46.18	**639**	219	0.35	38,740	62.64	**684**	161	0.26	48,187	77.92
595	232	0.38	28,793	46.56	**640**	219	0.35	38,959	62.99	**685**	179	0.29	48,366	78.21
596	233	0.38	29,026	46.93	**641**	216	0.35	39,175	63.34	**686**	179	0.29	48,545	78.49
597	229	0.37	29,255	47.30	**642**	230	0.37	39,405	63.72	**687**	175	0.28	48,720	78.78
598	227	0.37	29,482	47.67	**643**	252	0.41	39,657	64.12	**688**	184	0.30	48,904	79.08
599	221	0.36	29,703	48.03	**644**	247	0.40	39,904	64.52	**689**	163	0.26	49,067	79.34
600	213	0.34	29,916	48.37	**645**	260	0.42	40,164	64.94	**690**	185	0.30	49,252	79.64
601	225	0.36	30,141	48.74	**646**	233	0.38	40,397	65.32	**691**	212	0.34	49,464	79.98
602	231	0.37	30,372	49.11	**647**	221	0.36	40,618	65.68	**692**	166	0.27	49,630	80.25
603	221	0.36	30,593	49.47	**648**	212	0.34	40,830	66.02	**693**	181	0.29	49,811	80.54
604	226	0.37	30,819	49.83	**649**	216	0.35	41,046	66.37	**694**	183	0.30	49,994	80.84
605	209	0.34	31,028	50.17	**650**	218	0.35	41,264	66.72	**695**	175	0.28	50,169	81.12
606	233	0.38	31,261	50.55	**651**	263	0.43	41,527	67.15	**696**	173	0.28	50,342	81.40
607	235	0.38	31,496	50.93	**652**	214	0.35	41,741	67.49	**697**	169	0.27	50,511	81.67
608	211	0.34	31,707	51.27	**653**	215	0.35	41,956	67.84	**698**	180	0.29	50,691	81.96
609	264	0.43	31,971	51.70	**654**	229	0.37	42,185	68.21	**699**	185	0.30	50,876	82.26
610	257	0.42	32,228	52.11	**655**	208	0.34	42,393	68.55	**700**	177	0.29	51,053	82.55
611	210	0.34	32,438	52.45	**656**	207	0.33	42,600	68.88	**701**	176	0.28	51,229	82.83
612	242	0.39	32,680	52.84	**657**	239	0.39	42,839	69.27	**702**	157	0.25	51,386	83.09
613	220	0.36	32,900	53.20	**658**	219	0.35	43,058	69.62	**703**	164	0.27	51,550	83.35
614	240	0.39	33,140	53.59	**659**	207	0.33	43,265	69.96	**704**	179	0.29	51,729	83.64

Table 31. 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	151	0.24	51,880	83.89	**750**	93	0.15	57,574	93.09	**795**	35	0.06	60,341	97.57
706	175	0.28	52,055	84.17	**751**	87	0.14	57,661	93.23	**796**	36	0.06	60,377	97.63
707	173	0.28	52,228	84.45	**752**	78	0.13	57,739	93.36	**797**	27	0.04	60,404	97.67
708	153	0.25	52,381	84.70	**753**	75	0.12	57,814	93.48	**798**	30	0.05	60,434	97.72
709	145	0.23	52,526	84.93	**754**	83	0.13	57,897	93.62	**799**	25	0.04	60,459	97.76
710	159	0.26	52,685	85.19	**755**	85	0.14	57,982	93.75	**800**	38	0.06	60,497	97.82
711	168	0.27	52,853	85.46	**756**	98	0.16	58,080	93.91	**801**	29	0.05	60,526	97.87
712	145	0.23	52,998	85.69	**757**	81	0.13	58,161	94.04	**802**	37	0.06	60,563	97.93
713	148	0.24	53,146	85.93	**758**	66	0.11	58,227	94.15	**803**	28	0.05	60,591	97.97
714	142	0.23	53,288	86.16	**759**	88	0.14	58,315	94.29	**804**	30	0.05	60,621	98.02
715	152	0.25	53,440	86.41	**760**	83	0.13	58,398	94.43	**805**	38	0.06	60,659	98.08
716	155	0.25	53,595	86.66	**761**	69	0.11	58,467	94.54	**806**	35	0.06	60,694	98.14
717	151	0.24	53,746	86.90	**762**	71	0.11	58,538	94.65	**807**	28	0.05	60,722	98.18
718	168	0.27	53,914	87.18	**763**	63	0.10	58,601	94.75	**808**	39	0.06	60,761	98.25
719	127	0.21	54,041	87.38	**764**	69	0.11	58,670	94.87	**809**	34	0.05	60,795	98.30
720	134	0.22	54,175	87.60	**765**	60	0.10	58,730	94.96	**810**	28	0.05	60,823	98.35
721	138	0.22	54,313	87.82	**766**	67	0.11	58,797	95.07	**811**	18	0.03	60,841	98.38
722	145	0.23	54,458	88.06	**767**	68	0.11	58,865	95.18	**812**	23	0.04	60,864	98.41
723	115	0.19	54,573	88.24	**768**	80	0.13	58,945	95.31	**813**	28	0.05	60,892	98.46
724	134	0.22	54,707	88.46	**769**	64	0.10	59,009	95.41	**814**	24	0.04	60,916	98.50
725	128	0.21	54,835	88.67	**770**	70	0.11	59,079	95.53	**815**	34	0.05	60,950	98.55
726	127	0.21	54,962	88.87	**771**	67	0.11	59,146	95.64	**816**	32	0.05	60,982	98.60
727	118	0.19	55,080	89.06	**772**	50	0.08	59,196	95.72	**817**	18	0.03	61,000	98.63
728	124	0.20	55,204	89.26	**773**	58	0.09	59,254	95.81	**818**	24	0.04	61,024	98.67
729	123	0.20	55,327	89.46	**774**	69	0.11	59,323	95.92	**819**	18	0.03	61,042	98.70
730	114	0.18	55,441	89.65	**775**	68	0.11	59,391	96.03	**820**	26	0.04	61,068	98.74
731	118	0.19	55,559	89.84	**776**	55	0.09	59,446	96.12	**821**	14	0.02	61,082	98.77
732	116	0.19	55,675	90.02	**777**	59	0.10	59,505	96.22	**822**	24	0.04	61,106	98.81
733	114	0.18	55,789	90.21	**778**	46	0.07	59,551	96.29	**823**	20	0.03	61,126	98.84
734	98	0.16	55,887	90.37	**779**	55	0.09	59,606	96.38	**824**	20	0.03	61,146	98.87
735	109	0.18	55,996	90.54	**780**	54	0.09	59,660	96.47	**825**	31	0.05	61,177	98.92
736	102	0.16	56,098	90.71	**781**	58	0.09	59,718	96.56	**826**	9	0.01	61,186	98.93
737	128	0.21	56,226	90.91	**782**	49	0.08	59,767	96.64	**827**	17	0.03	61,203	98.96
738	113	0.18	56,339	91.10	**783**	49	0.08	59,816	96.72	**828**	17	0.03	61,220	98.99
739	116	0.19	56,455	91.28	**784**	42	0.07	59,858	96.79	**829**	15	0.02	61,235	99.01
740	120	0.19	56,575	91.48	**785**	34	0.05	59,892	96.84	**830**	16	0.03	61,251	99.04
741	112	0.18	56,687	91.66	**786**	35	0.06	59,927	96.90	**831**	13	0.02	61,264	99.06
742	97	0.16	56,784	91.82	**787**	52	0.08	59,979	96.98	**832**	18	0.03	61,282	99.09
743	105	0.17	56,889	91.99	**788**	48	0.08	60,027	97.06	**833**	15	0.02	61,297	99.11
744	107	0.17	56,996	92.16	**789**	52	0.08	60,079	97.14	**834**	20	0.03	61,317	99.15
745	88	0.14	57,084	92.30	**790**	41	0.07	60,120	97.21	**835**	14	0.02	61,331	99.17
746	94	0.15	57,178	92.45	**791**	40	0.06	60,160	97.28	**836**	16	0.03	61,347	99.19
747	100	0.16	57,278	92.62	**792**	56	0.09	60,216	97.37	**837**	17	0.03	61,364	99.22
748	96	0.16	57,374	92.77	**793**	46	0.07	60,262	97.44	**838**	13	0.02	61,377	99.24
749	107	0.17	57,481	92.94	**794**	44	0.07	60,306	97.51	**839**	12	0.02	61,389	99.26

Table 31. Grade 5 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	10	0.02	61,399	99.28	**887**	2	0.00	61,736	99.82
841	10	0.02	61,409	99.30	**889**	8	0.01	61,744	99.84
842	11	0.02	61,420	99.31	**890**	1	0.00	61,745	99.84
843	9	0.01	61,429	99.33	**891**	3	0.00	61,748	99.84
844	17	0.03	61,446	99.35	**892**	4	0.01	61,752	99.85
845	11	0.02	61,457	99.37	**893**	5	0.01	61,757	99.86
846	12	0.02	61,469	99.39	**894**	5	0.01	61,762	99.87
847	17	0.03	61,486	99.42	**895**	1	0.00	61,763	99.87
848	7	0.01	61,493	99.43	**896**	4	0.01	61,767	99.87
849	10	0.02	61,503	99.45	**898**	2	0.00	61,769	99.88
850	9	0.01	61,512	99.46	**899**	1	0.00	61,770	99.88
851	20	0.03	61,532	99.49	**900**	75	0.12	61,845	100.00
852	4	0.01	61,536	99.50					
853	4	0.01	61,540	99.51					
854	8	0.01	61,548	99.52					
855	5	0.01	61,553	99.53					
856	10	0.02	61,563	99.54					
857	4	0.01	61,567	99.55					
858	11	0.02	61,578	99.57					
859	7	0.01	61,585	99.58					
860	6	0.01	61,591	99.59					
861	10	0.02	61,601	99.61					
862	5	0.01	61,606	99.61					
863	8	0.01	61,614	99.63					
864	8	0.01	61,622	99.64					
865	9	0.01	61,631	99.65					
866	7	0.01	61,638	99.67					
867	9	0.01	61,647	99.68					
868	4	0.01	61,651	99.69					
869	9	0.01	61,660	99.70					
870	7	0.01	61,667	99.71					
871	3	0.00	61,670	99.72					
872	5	0.01	61,675	99.73					
873	9	0.01	61,684	99.74					
874	6	0.01	61,690	99.75					
875	3	0.00	61,693	99.75					
876	5	0.01	61,698	99.76					
877	3	0.00	61,701	99.77					
878	2	0.00	61,703	99.77					
879	5	0.01	61,708	99.78					
880	7	0.01	61,715	99.79					
881	6	0.01	61,721	99.80					
884	2	0.00	61,723	99.80					
885	4	0.01	61,727	99.81					
886	7	0.01	61,734	99.82					

Table 32. Grade 7 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	509	2.56	509	2.56	**345**	5	0.03	701	3.53	**390**	14	0.07	1,035	5.20
301	2	0.01	511	2.57	**346**	10	0.05	711	3.58	**391**	17	0.09	1,052	5.29
302	4	0.02	515	2.59	**347**	5	0.03	716	3.60	**392**	16	0.08	1,068	5.37
303	4	0.02	519	2.61	**348**	6	0.03	722	3.63	**393**	10	0.05	1,078	5.42
304	4	0.02	523	2.63	**349**	3	0.02	725	3.65	**394**	13	0.07	1,091	5.49
305	2	0.01	525	2.64	**350**	3	0.02	728	3.66	**395**	11	0.06	1,102	5.54
306	4	0.02	529	2.66	**351**	9	0.05	737	3.71	**396**	12	0.06	1,114	5.60
307	1	0.01	530	2.67	**352**	8	0.04	745	3.75	**397**	11	0.06	1,125	5.66
308	3	0.02	533	2.68	**353**	8	0.04	753	3.79	**398**	6	0.03	1,131	5.69
309	3	0.02	536	2.70	**354**	6	0.03	759	3.82	**399**	14	0.07	1,145	5.76
310	1	0.01	537	2.70	**355**	4	0.02	763	3.84	**400**	14	0.07	1,159	5.83
311	6	0.03	543	2.73	**356**	5	0.03	768	3.86	**401**	13	0.07	1,172	5.89
312	1	0.01	544	2.74	**357**	6	0.03	774	3.89	**402**	14	0.07	1,186	5.96
313	5	0.03	549	2.76	**358**	6	0.03	780	3.92	**403**	11	0.06	1,197	6.02
314	12	0.06	561	2.82	**359**	4	0.02	784	3.94	**404**	13	0.07	1,210	6.08
315	3	0.02	564	2.84	**360**	3	0.02	787	3.96	**405**	9	0.05	1,219	6.13
316	5	0.03	569	2.86	**361**	1	0.01	788	3.96	**406**	5	0.03	1,224	6.16
317	1	0.01	570	2.87	**362**	7	0.04	795	4.00	**407**	10	0.05	1,234	6.21
318	6	0.03	576	2.90	**363**	2	0.01	797	4.01	**408**	9	0.05	1,243	6.25
319	3	0.02	579	2.91	**364**	12	0.06	809	4.07	**409**	6	0.03	1,249	6.28
320	3	0.02	582	2.93	**365**	6	0.03	815	4.10	**410**	17	0.09	1,266	6.37
321	1	0.01	583	2.93	**366**	9	0.05	824	4.14	**411**	19	0.10	1,285	6.46
322	5	0.03	588	2.96	**367**	7	0.04	831	4.18	**412**	13	0.07	1,298	6.53
323	3	0.02	591	2.97	**368**	7	0.04	838	4.21	**413**	16	0.08	1,314	6.61
324	5	0.03	596	3.00	**369**	8	0.04	846	4.25	**414**	9	0.05	1,323	6.65
325	3	0.02	599	3.01	**370**	6	0.03	852	4.28	**415**	14	0.07	1,337	6.72
326	4	0.02	603	3.03	**371**	15	0.08	867	4.36	**416**	18	0.09	1,355	6.81
327	4	0.02	607	3.05	**372**	6	0.03	873	4.39	**417**	17	0.09	1,372	6.90
328	3	0.02	610	3.07	**373**	7	0.04	880	4.43	**418**	10	0.05	1,382	6.95
329	6	0.03	616	3.10	**374**	8	0.04	888	4.47	**419**	12	0.06	1,394	7.01
330	3	0.02	619	3.11	**375**	5	0.03	893	4.49	**420**	15	0.08	1,409	7.09
331	5	0.03	624	3.14	**376**	5	0.03	898	4.52	**421**	7	0.04	1,416	7.12
332	7	0.04	631	3.17	**377**	6	0.03	904	4.55	**422**	18	0.09	1,434	7.21
333	4	0.02	635	3.19	**378**	11	0.06	915	4.60	**423**	21	0.11	1,455	7.32
334	6	0.03	641	3.22	**379**	12	0.06	927	4.66	**424**	16	0.08	1,471	7.40
335	6	0.03	647	3.25	**380**	8	0.04	935	4.70	**425**	14	0.07	1,485	7.47
336	3	0.02	650	3.27	**381**	10	0.05	945	4.75	**426**	22	0.11	1,507	7.58
337	5	0.03	655	3.29	**382**	6	0.03	951	4.78	**427**	23	0.12	1,530	7.69
338	4	0.02	659	3.31	**383**	10	0.05	961	4.83	**428**	19	0.10	1,549	7.79
339	7	0.04	666	3.35	**384**	9	0.05	970	4.88	**429**	18	0.09	1,567	7.88
340	4	0.02	670	3.37	**385**	8	0.04	978	4.92	**430**	18	0.09	1,585	7.97
341	9	0.05	679	3.41	**386**	12	0.06	990	4.98	**431**	24	0.12	1,609	8.09
342	8	0.04	687	3.45	**387**	9	0.05	999	5.02	**432**	18	0.09	1,627	8.18
343	5	0.03	692	3.48	**388**	13	0.07	1,012	5.09	**433**	9	0.05	1,636	8.23
344	4	0.02	696	3.50	**389**	9	0.05	1,021	5.13	**434**	20	0.10	1,656	8.33

Table 32. 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	13	0.07	1,669	8.39	**480**	33	0.17	2,752	13.84	**525**	39	0.20	4,475	22.50
436	24	0.12	1,693	8.51	**481**	29	0.15	2,781	13.98	**526**	55	0.28	4,530	22.78
437	17	0.09	1,710	8.60	**482**	28	0.14	2,809	14.13	**527**	33	0.17	4,563	22.95
438	21	0.11	1,731	8.70	**483**	34	0.17	2,843	14.30	**528**	50	0.25	4,613	23.20
439	17	0.09	1,748	8.79	**484**	27	0.14	2,870	14.43	**529**	54	0.27	4,667	23.47
440	13	0.07	1,761	8.86	**485**	48	0.24	2,918	14.67	**530**	49	0.25	4,716	23.72
441	21	0.11	1,782	8.96	**486**	37	0.19	2,955	14.86	**531**	56	0.28	4,772	24.00
442	14	0.07	1,796	9.03	**487**	37	0.19	2,992	15.05	**532**	47	0.24	4,819	24.23
443	12	0.06	1,808	9.09	**488**	32	0.16	3,024	15.21	**533**	42	0.21	4,861	24.44
444	15	0.08	1,823	9.17	**489**	38	0.19	3,062	15.40	**534**	63	0.32	4,924	24.76
445	14	0.07	1,837	9.24	**490**	38	0.19	3,100	15.59	**535**	59	0.30	4,983	25.06
446	23	0.12	1,860	9.35	**491**	40	0.20	3,140	15.79	**536**	55	0.28	5,038	25.33
447	13	0.07	1,873	9.42	**492**	30	0.15	3,170	15.94	**537**	43	0.22	5,081	25.55
448	15	0.08	1,888	9.49	**493**	42	0.21	3,212	16.15	**538**	61	0.31	5,142	25.86
449	29	0.15	1,917	9.64	**494**	31	0.16	3,243	16.31	**539**	53	0.27	5,195	26.12
450	26	0.13	1,943	9.77	**495**	33	0.17	3,276	16.47	**540**	57	0.29	5,252	26.41
451	25	0.13	1,968	9.90	**496**	26	0.13	3,302	16.60	**541**	58	0.29	5,310	26.70
452	24	0.12	1,992	10.02	**497**	39	0.20	3,341	16.80	**542**	70	0.35	5,380	27.05
453	19	0.10	2,011	10.11	**498**	37	0.19	3,378	16.99	**543**	59	0.30	5,439	27.35
454	25	0.13	2,036	10.24	**499**	39	0.20	3,417	17.18	**544**	55	0.28	5,494	27.63
455	24	0.12	2,060	10.36	**500**	32	0.16	3,449	17.34	**545**	52	0.26	5,546	27.89
456	28	0.14	2,088	10.50	**501**	33	0.17	3,482	17.51	**546**	55	0.28	5,601	28.17
457	26	0.13	2,114	10.63	**502**	45	0.23	3,527	17.74	**547**	69	0.35	5,670	28.51
458	18	0.09	2,132	10.72	**503**	39	0.20	3,566	17.93	**548**	49	0.25	5,719	28.76
459	20	0.10	2,152	10.82	**504**	36	0.18	3,602	18.11	**549**	52	0.26	5,771	29.02
460	28	0.14	2,180	10.96	**505**	40	0.20	3,642	18.31	**550**	62	0.31	5,833	29.33
461	31	0.16	2,211	11.12	**506**	54	0.27	3,696	18.59	**551**	55	0.28	5,888	29.61
462	29	0.15	2,240	11.26	**507**	35	0.18	3,731	18.76	**552**	52	0.26	5,940	29.87
463	35	0.18	2,275	11.44	**508**	33	0.17	3,764	18.93	**553**	40	0.20	5,980	30.07
464	19	0.10	2,294	11.54	**509**	45	0.23	3,809	19.15	**554**	51	0.26	6,031	30.33
465	24	0.12	2,318	11.66	**510**	39	0.20	3,848	19.35	**555**	45	0.23	6,076	30.55
466	25	0.13	2,343	11.78	**511**	34	0.17	3,882	19.52	**556**	56	0.28	6,132	30.84
467	27	0.14	2,370	11.92	**512**	39	0.20	3,921	19.72	**557**	67	0.34	6,199	31.17
468	30	0.15	2,400	12.07	**513**	43	0.22	3,964	19.93	**558**	51	0.26	6,250	31.43
469	32	0.16	2,432	12.23	**514**	56	0.28	4,020	20.22	**559**	73	0.37	6,323	31.80
470	23	0.12	2,455	12.35	**515**	40	0.20	4,060	20.42	**560**	48	0.24	6,371	32.04
471	36	0.18	2,491	12.53	**516**	35	0.18	4,095	20.59	**561**	66	0.33	6,437	32.37
472	20	0.10	2,511	12.63	**517**	29	0.15	4,124	20.74	**562**	60	0.30	6,497	32.67
473	22	0.11	2,533	12.74	**518**	41	0.21	4,165	20.94	**563**	52	0.26	6,549	32.93
474	39	0.20	2,572	12.93	**519**	50	0.25	4,215	21.20	**564**	55	0.28	6,604	33.21
475	24	0.12	2,596	13.05	**520**	47	0.24	4,262	21.43	**565**	58	0.29	6,662	33.50
476	30	0.15	2,626	13.21	**521**	47	0.24	4,309	21.67	**566**	60	0.30	6,722	33.80
477	34	0.17	2,660	13.38	**522**	39	0.20	4,348	21.86	**567**	63	0.32	6,785	34.12
478	26	0.13	2,686	13.51	**523**	44	0.22	4,392	22.09	**568**	57	0.29	6,842	34.41
479	33	0.17	2,719	13.67	**524**	44	0.22	4,436	22.31	**569**	68	0.34	6,910	34.75

Table 32. 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	69	0.35	6,979	35.10	**615**	79	0.40	10,145	51.02	**660**	79	0.40	13,504	67.91
571	53	0.27	7,032	35.36	**616**	87	0.44	10,232	51.45	**661**	91	0.46	13,595	68.36
572	70	0.35	7,102	35.71	**617**	79	0.40	10,311	51.85	**662**	77	0.39	13,672	68.75
573	66	0.33	7,168	36.05	**618**	68	0.34	10,379	52.19	**663**	76	0.38	13,748	69.13
574	64	0.32	7,232	36.37	**619**	76	0.38	10,455	52.57	**664**	92	0.46	13,840	69.60
575	67	0.34	7,299	36.70	**620**	81	0.41	10,536	52.98	**665**	83	0.42	13,923	70.01
576	76	0.38	7,375	37.09	**621**	64	0.32	10,600	53.30	**666**	62	0.31	13,985	70.33
577	59	0.30	7,434	37.38	**622**	65	0.33	10,665	53.63	**667**	55	0.28	14,040	70.60
578	69	0.35	7,503	37.73	**623**	88	0.44	10,753	54.07	**668**	61	0.31	14,101	70.91
579	65	0.33	7,568	38.06	**624**	65	0.33	10,818	54.40	**669**	76	0.38	14,177	71.29
580	81	0.41	7,649	38.46	**625**	62	0.31	10,880	54.71	**670**	78	0.39	14,255	71.68
581	71	0.36	7,720	38.82	**626**	80	0.40	10,960	55.11	**671**	77	0.39	14,332	72.07
582	66	0.33	7,786	39.15	**627**	72	0.36	11,032	55.48	**672**	75	0.38	14,407	72.45
583	63	0.32	7,849	39.47	**628**	77	0.39	11,109	55.86	**673**	68	0.34	14,475	72.79
584	72	0.36	7,921	39.83	**629**	74	0.37	11,183	56.24	**674**	55	0.28	14,530	73.07
585	64	0.32	7,985	40.15	**630**	75	0.38	11,258	56.61	**675**	66	0.33	14,596	73.40
586	78	0.39	8,063	40.55	**631**	68	0.34	11,326	56.95	**676**	86	0.43	14,682	73.83
587	65	0.33	8,128	40.87	**632**	79	0.40	11,405	57.35	**677**	71	0.36	14,753	74.19
588	74	0.37	8,202	41.25	**633**	82	0.41	11,487	57.76	**678**	65	0.33	14,818	74.51
589	75	0.38	8,277	41.62	**634**	75	0.38	11,562	58.14	**679**	74	0.37	14,892	74.89
590	87	0.44	8,364	42.06	**635**	74	0.37	11,636	58.51	**680**	63	0.32	14,955	75.20
591	83	0.42	8,447	42.48	**636**	65	0.33	11,701	58.84	**681**	68	0.34	15,023	75.55
592	69	0.35	8,516	42.82	**637**	78	0.39	11,779	59.23	**682**	73	0.37	15,096	75.91
593	62	0.31	8,578	43.14	**638**	54	0.27	11,833	59.50	**683**	63	0.32	15,159	76.23
594	73	0.37	8,651	43.50	**639**	76	0.38	11,909	59.89	**684**	81	0.41	15,240	76.64
595	77	0.39	8,728	43.89	**640**	81	0.41	11,990	60.29	**685**	63	0.32	15,303	76.95
596	68	0.34	8,796	44.23	**641**	64	0.32	12,054	60.62	**686**	64	0.32	15,367	77.28
597	61	0.31	8,857	44.54	**642**	74	0.37	12,128	60.99	**687**	65	0.33	15,432	77.60
598	74	0.37	8,931	44.91	**643**	72	0.36	12,200	61.35	**688**	66	0.33	15,498	77.93
599	60	0.30	8,991	45.21	**644**	73	0.37	12,273	61.72	**689**	62	0.31	15,560	78.25
600	63	0.32	9,054	45.53	**645**	90	0.45	12,363	62.17	**690**	55	0.28	15,615	78.52
601	72	0.36	9,126	45.89	**646**	57	0.29	12,420	62.46	**691**	71	0.36	15,686	78.88
602	74	0.37	9,200	46.26	**647**	71	0.36	12,491	62.81	**692**	63	0.32	15,749	79.20
603	79	0.40	9,279	46.66	**648**	72	0.36	12,563	63.18	**693**	74	0.37	15,823	79.57
604	67	0.34	9,346	47.00	**649**	97	0.49	12,660	63.66	**694**	65	0.33	15,888	79.90
605	77	0.39	9,423	47.39	**650**	70	0.35	12,730	64.01	**695**	72	0.36	15,960	80.26
606	87	0.44	9,510	47.82	**651**	83	0.42	12,813	64.43	**696**	60	0.30	16,020	80.56
607	66	0.33	9,576	48.15	**652**	69	0.35	12,882	64.78	**697**	67	0.34	16,087	80.90
608	71	0.36	9,647	48.51	**653**	74	0.37	12,956	65.15	**698**	60	0.30	16,147	81.20
609	65	0.33	9,712	48.84	**654**	78	0.39	13,034	65.54	**699**	63	0.32	16,210	81.51
610	77	0.39	9,789	49.23	**655**	80	0.40	13,114	65.95	**700**	61	0.31	16,271	81.82
611	51	0.26	9,840	49.48	**656**	76	0.38	13,190	66.33	**701**	60	0.30	16,331	82.12
612	84	0.42	9,924	49.90	**657**	81	0.41	13,271	66.74	**702**	46	0.23	16,377	82.35
613	65	0.33	9,989	50.23	**658**	75	0.38	13,346	67.11	**703**	55	0.28	16,432	82.63
614	77	0.39	10,066	50.62	**659**	79	0.40	13,425	67.51	**704**	43	0.22	16,475	82.85

Table 32. 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	61	0.31	16,536	83.15	**750**	26	0.13	18,585	93.46	**795**	9	0.05	19,513	98.12
706	56	0.28	16,592	83.44	**751**	29	0.15	18,614	93.60	**796**	15	0.08	19,528	98.20
707	77	0.39	16,669	83.82	**752**	31	0.16	18,645	93.76	**797**	8	0.04	19,536	98.24
708	37	0.19	16,706	84.01	**753**	32	0.16	18,677	93.92	**798**	13	0.07	19,549	98.31
709	63	0.32	16,769	84.33	**754**	37	0.19	18,714	94.11	**799**	11	0.06	19,560	98.36
710	52	0.26	16,821	84.59	**755**	24	0.12	18,738	94.23	**800**	17	0.09	19,577	98.45
711	56	0.28	16,877	84.87	**756**	22	0.11	18,760	94.34	**801**	12	0.06	19,589	98.51
712	55	0.28	16,932	85.15	**757**	35	0.18	18,795	94.51	**802**	8	0.04	19,597	98.55
713	63	0.32	16,995	85.46	**758**	32	0.16	18,827	94.67	**803**	8	0.04	19,605	98.59
714	45	0.23	17,040	85.69	**759**	27	0.14	18,854	94.81	**804**	6	0.03	19,611	98.62
715	43	0.22	17,083	85.90	**760**	21	0.11	18,875	94.92	**805**	7	0.04	19,618	98.65
716	63	0.32	17,146	86.22	**761**	32	0.16	18,907	95.08	**806**	9	0.05	19,627	98.70
717	45	0.23	17,191	86.45	**762**	28	0.14	18,935	95.22	**807**	8	0.04	19,635	98.74
718	58	0.29	17,249	86.74	**763**	24	0.12	18,959	95.34	**808**	13	0.07	19,648	98.80
719	66	0.33	17,315	87.07	**764**	24	0.12	18,983	95.46	**809**	7	0.04	19,655	98.84
720	50	0.25	17,365	87.32	**765**	25	0.13	19,008	95.58	**810**	5	0.03	19,660	98.86
721	49	0.25	17,414	87.57	**766**	23	0.12	19,031	95.70	**811**	5	0.03	19,665	98.89
722	37	0.19	17,451	87.76	**767**	27	0.14	19,058	95.84	**812**	5	0.03	19,670	98.91
723	47	0.24	17,498	87.99	**768**	31	0.16	19,089	95.99	**813**	4	0.02	19,674	98.93
724	47	0.24	17,545	88.23	**769**	15	0.08	19,104	96.07	**814**	3	0.02	19,677	98.95
725	49	0.25	17,594	88.47	**770**	28	0.14	19,132	96.21	**815**	8	0.04	19,685	98.99
726	56	0.28	17,650	88.76	**771**	27	0.14	19,159	96.34	**816**	7	0.04	19,692	99.02
727	47	0.24	17,697	88.99	**772**	18	0.09	19,177	96.43	**817**	9	0.05	19,701	99.07
728	38	0.19	17,735	89.18	**773**	24	0.12	19,201	96.56	**818**	6	0.03	19,707	99.10
729	52	0.26	17,787	89.44	**774**	10	0.05	19,211	96.61	**819**	8	0.04	19,715	99.14
730	46	0.23	17,833	89.68	**775**	20	0.10	19,231	96.71	**820**	3	0.02	19,718	99.16
731	48	0.24	17,881	89.92	**776**	23	0.12	19,254	96.82	**821**	5	0.03	19,723	99.18
732	38	0.19	17,919	90.11	**777**	20	0.10	19,274	96.92	**822**	3	0.02	19,726	99.20
733	50	0.25	17,969	90.36	**778**	15	0.08	19,289	97.00	**823**	2	0.01	19,728	99.21
734	51	0.26	18,020	90.62	**779**	20	0.10	19,309	97.10	**824**	8	0.04	19,736	99.25
735	38	0.19	18,058	90.81	**780**	14	0.07	19,323	97.17	**825**	1	0.01	19,737	99.25
736	44	0.22	18,102	91.03	**781**	12	0.06	19,335	97.23	**826**	6	0.03	19,743	99.28
737	28	0.14	18,130	91.17	**782**	10	0.05	19,345	97.28	**827**	4	0.02	19,747	99.30
738	37	0.19	18,167	91.36	**783**	17	0.09	19,362	97.36	**828**	10	0.05	19,757	99.35
739	49	0.25	18,216	91.60	**784**	11	0.06	19,373	97.42	**829**	4	0.02	19,761	99.37
740	30	0.15	18,246	91.75	**785**	14	0.07	19,387	97.49	**830**	6	0.03	19,767	99.40
741	26	0.13	18,272	91.88	**786**	11	0.06	19,398	97.55	**831**	4	0.02	19,771	99.42
742	35	0.18	18,307	92.06	**787**	14	0.07	19,412	97.62	**832**	1	0.01	19,772	99.43
743	40	0.20	18,347	92.26	**788**	9	0.05	19,421	97.66	**833**	5	0.03	19,777	99.45
744	40	0.20	18,387	92.46	**789**	14	0.07	19,435	97.73	**834**	4	0.02	19,781	99.47
745	32	0.16	18,419	92.62	**790**	21	0.11	19,456	97.84	**835**	5	0.03	19,786	99.50
746	33	0.17	18,452	92.79	**791**	8	0.04	19,464	97.88	**836**	5	0.03	19,791	99.52
747	39	0.20	18,491	92.99	**792**	13	0.07	19,477	97.94	**837**	4	0.02	19,795	99.54
748	35	0.18	18,526	93.16	**793**	13	0.07	19,490	98.01	**838**	8	0.04	19,803	99.58
749	33	0.17	18,559	93.33	**794**	14	0.07	19,504	98.08	**839**	5	0.03	19,808	99.61

Table 32. Grade 7 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %
840	1	0.01	19,809	99.61
841	6	0.03	19,815	99.64
842	3	0.02	19,818	99.66
843	1	0.01	19,819	99.66
844	3	0.02	19,822	99.68
845	2	0.01	19,824	99.69
846	3	0.02	19,827	99.70
847	2	0.01	19,829	99.71
849	1	0.01	19,830	99.72
850	3	0.02	19,833	99.73
851	2	0.01	19,835	99.74
852	3	0.02	19,838	99.76
854	3	0.02	19,841	99.77
855	2	0.01	19,843	99.78
856	1	0.01	19,844	99.79
857	1	0.01	19,845	99.79
858	1	0.01	19,846	99.80
860	2	0.01	19,848	99.81
866	1	0.01	19,849	99.81
869	1	0.01	19,850	99.82
870	3	0.02	19,853	99.83
872	3	0.02	19,856	99.85
875	2	0.01	19,858	99.86
877	1	0.01	19,859	99.86
882	1	0.01	19,860	99.87
883	1	0.01	19,861	99.87
884	2	0.01	19,863	99.88
886	1	0.01	19,864	99.89
889	1	0.01	19,865	99.89
890	1	0.01	19,866	99.90
891	1	0.01	19,867	99.90
892	1	0.01	19,868	99.91
894	2	0.01	19,870	99.92
896	1	0.01	19,871	99.92
899	1	0.01	19,872	99.93
900	14	0.07	19,886	100.00

Table 33. Grade 8 Cumulative Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	1,435	2.66	1,435	2.66	**345**	26	0.05	2,385	4.43	**390**	49	0.09	3,847	7.14
301	20	0.04	1,455	2.70	**346**	25	0.05	2,410	4.47	**391**	41	0.08	3,888	7.22
302	14	0.03	1,469	2.73	**347**	25	0.05	2,435	4.52	**392**	45	0.08	3,933	7.30
303	16	0.03	1,485	2.76	**348**	25	0.05	2,460	4.57	**393**	46	0.09	3,979	7.38
304	12	0.02	1,497	2.78	**349**	21	0.04	2,481	4.60	**394**	36	0.07	4,015	7.45
305	14	0.03	1,511	2.80	**350**	27	0.05	2,508	4.65	**395**	34	0.06	4,049	7.51
306	10	0.02	1,521	2.82	**351**	24	0.04	2,532	4.70	**396**	51	0.09	4,100	7.61
307	14	0.03	1,535	2.85	**352**	25	0.05	2,557	4.75	**397**	60	0.11	4,160	7.72
308	19	0.04	1,554	2.88	**353**	18	0.03	2,575	4.78	**398**	38	0.07	4,198	7.79
309	19	0.04	1,573	2.92	**354**	27	0.05	2,602	4.83	**399**	32	0.06	4,230	7.85
310	20	0.04	1,593	2.96	**355**	30	0.06	2,632	4.88	**400**	48	0.09	4,278	7.94
311	17	0.03	1,610	2.99	**356**	28	0.05	2,660	4.94	**401**	47	0.09	4,325	8.03
312	21	0.04	1,631	3.03	**357**	36	0.07	2,696	5.00	**402**	61	0.11	4,386	8.14
313	22	0.04	1,653	3.07	**358**	29	0.05	2,725	5.06	**403**	55	0.10	4,441	8.24
314	23	0.04	1,676	3.11	**359**	36	0.07	2,761	5.12	**404**	39	0.07	4,480	8.31
315	15	0.03	1,691	3.14	**360**	21	0.04	2,782	5.16	**405**	49	0.09	4,529	8.40
316	18	0.03	1,709	3.17	**361**	24	0.04	2,806	5.21	**406**	59	0.11	4,588	8.51
317	15	0.03	1,724	3.20	**362**	31	0.06	2,837	5.26	**407**	63	0.12	4,651	8.63
318	31	0.06	1,755	3.26	**363**	29	0.05	2,866	5.32	**408**	60	0.11	4,711	8.74
319	20	0.04	1,775	3.29	**364**	36	0.07	2,902	5.39	**409**	53	0.10	4,764	8.84
320	21	0.04	1,796	3.33	**365**	29	0.05	2,931	5.44	**410**	54	0.10	4,818	8.94
321	21	0.04	1,817	3.37	**366**	28	0.05	2,959	5.49	**411**	48	0.09	4,866	9.03
322	22	0.04	1,839	3.41	**367**	28	0.05	2,987	5.54	**412**	57	0.11	4,923	9.14
323	16	0.03	1,855	3.44	**368**	30	0.06	3,017	5.60	**413**	52	0.10	4,975	9.23
324	20	0.04	1,875	3.48	**369**	29	0.05	3,046	5.65	**414**	44	0.08	5,019	9.31
325	17	0.03	1,892	3.51	**370**	28	0.05	3,074	5.70	**415**	48	0.09	5,067	9.40
326	22	0.04	1,914	3.55	**371**	36	0.07	3,110	5.77	**416**	42	0.08	5,109	9.48
327	18	0.03	1,932	3.59	**372**	38	0.07	3,148	5.84	**417**	50	0.09	5,159	9.57
328	26	0.05	1,958	3.63	**373**	50	0.09	3,198	5.93	**418**	64	0.12	5,223	9.69
329	24	0.04	1,982	3.68	**374**	33	0.06	3,231	6.00	**419**	67	0.12	5,290	9.82
330	26	0.05	2,008	3.73	**375**	31	0.06	3,262	6.05	**420**	73	0.14	5,363	9.95
331	28	0.05	2,036	3.78	**376**	45	0.08	3,307	6.14	**421**	64	0.12	5,427	10.07
332	20	0.04	2,056	3.82	**377**	38	0.07	3,345	6.21	**422**	61	0.11	5,488	10.18
333	22	0.04	2,078	3.86	**378**	30	0.06	3,375	6.26	**423**	62	0.12	5,550	10.30
334	21	0.04	2,099	3.90	**379**	31	0.06	3,406	6.32	**424**	70	0.13	5,620	10.43
335	32	0.06	2,131	3.95	**380**	37	0.07	3,443	6.39	**425**	71	0.13	5,691	10.56
336	21	0.04	2,152	3.99	**381**	35	0.06	3,478	6.45	**426**	53	0.10	5,744	10.66
337	31	0.06	2,183	4.05	**382**	44	0.08	3,522	6.54	**427**	63	0.12	5,807	10.78
338	17	0.03	2,200	4.08	**383**	39	0.07	3,561	6.61	**428**	66	0.12	5,873	10.90
339	29	0.05	2,229	4.14	**384**	44	0.08	3,605	6.69	**429**	59	0.11	5,932	11.01
340	33	0.06	2,262	4.20	**385**	34	0.06	3,639	6.75	**430**	65	0.12	5,997	11.13
341	20	0.04	2,282	4.23	**386**	51	0.09	3,690	6.85	**431**	69	0.13	6,066	11.26
342	21	0.04	2,303	4.27	**387**	35	0.06	3,725	6.91	**432**	58	0.11	6,124	11.36
343	27	0.05	2,330	4.32	**388**	41	0.08	3,766	6.99	**433**	59	0.11	6,183	11.47
344	29	0.05	2,359	4.38	**389**	32	0.06	3,798	7.05	**434**	71	0.13	6,254	11.61

Table 33. 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	56	0.10	6,310	11.71	**480**	118	0.22	10,167	18.87	**525**	136	0.25	15,595	28.94
436	72	0.13	6,382	11.84	**481**	105	0.19	10,272	19.06	**526**	133	0.25	15,728	29.19
437	71	0.13	6,453	11.98	**482**	91	0.17	10,363	19.23	**527**	141	0.26	15,869	29.45
438	72	0.13	6,525	12.11	**483**	119	0.22	10,482	19.45	**528**	146	0.27	16,015	29.72
439	76	0.14	6,601	12.25	**484**	116	0.22	10,598	19.67	**529**	129	0.24	16,144	29.96
440	67	0.12	6,668	12.37	**485**	118	0.22	10,716	19.89	**530**	139	0.26	16,283	30.22
441	71	0.13	6,739	12.51	**486**	101	0.19	10,817	20.07	**531**	137	0.25	16,420	30.47
442	67	0.12	6,806	12.63	**487**	114	0.21	10,931	20.29	**532**	143	0.27	16,563	30.74
443	71	0.13	6,877	12.76	**488**	122	0.23	11,053	20.51	**533**	152	0.28	16,715	31.02
444	94	0.17	6,971	12.94	**489**	103	0.19	11,156	20.70	**534**	146	0.27	16,861	31.29
445	67	0.12	7,038	13.06	**490**	105	0.19	11,261	20.90	**535**	157	0.29	17,018	31.58
446	79	0.15	7,117	13.21	**491**	97	0.18	11,358	21.08	**536**	135	0.25	17,153	31.83
447	74	0.14	7,191	13.35	**492**	113	0.21	11,471	21.29	**537**	150	0.28	17,303	32.11
448	76	0.14	7,267	13.49	**493**	119	0.22	11,590	21.51	**538**	145	0.27	17,448	32.38
449	73	0.14	7,340	13.62	**494**	112	0.21	11,702	21.72	**539**	159	0.30	17,607	32.68
450	80	0.15	7,420	13.77	**495**	120	0.22	11,822	21.94	**540**	166	0.31	17,773	32.98
451	88	0.16	7,508	13.93	**496**	120	0.22	11,942	22.16	**541**	147	0.27	17,920	33.26
452	70	0.13	7,578	14.06	**497**	126	0.23	12,068	22.40	**542**	154	0.29	18,074	33.54
453	74	0.14	7,652	14.20	**498**	109	0.20	12,177	22.60	**543**	139	0.26	18,213	33.80
454	80	0.15	7,732	14.35	**499**	114	0.21	12,291	22.81	**544**	145	0.27	18,358	34.07
455	92	0.17	7,824	14.52	**500**	126	0.23	12,417	23.04	**545**	177	0.33	18,535	34.40
456	78	0.14	7,902	14.66	**501**	128	0.24	12,545	23.28	**546**	140	0.26	18,675	34.66
457	79	0.15	7,981	14.81	**502**	132	0.24	12,677	23.53	**547**	151	0.28	18,826	34.94
458	96	0.18	8,077	14.99	**503**	116	0.22	12,793	23.74	**548**	146	0.27	18,972	35.21
459	100	0.19	8,177	15.17	**504**	117	0.22	12,910	23.96	**549**	161	0.30	19,133	35.51
460	84	0.16	8,261	15.33	**505**	114	0.21	13,024	24.17	**550**	169	0.31	19,302	35.82
461	71	0.13	8,332	15.46	**506**	113	0.21	13,137	24.38	**551**	161	0.30	19,463	36.12
462	82	0.15	8,414	15.61	**507**	120	0.22	13,257	24.60	**552**	135	0.25	19,598	36.37
463	98	0.18	8,512	15.80	**508**	136	0.25	13,393	24.85	**553**	159	0.30	19,757	36.67
464	89	0.17	8,601	15.96	**509**	110	0.20	13,503	25.06	**554**	158	0.29	19,915	36.96
465	80	0.15	8,681	16.11	**510**	131	0.24	13,634	25.30	**555**	174	0.32	20,089	37.28
466	98	0.18	8,779	16.29	**511**	129	0.24	13,763	25.54	**556**	160	0.30	20,249	37.58
467	72	0.13	8,851	16.43	**512**	114	0.21	13,877	25.75	**557**	188	0.35	20,437	37.93
468	94	0.17	8,945	16.60	**513**	162	0.30	14,039	26.05	**558**	204	0.38	20,641	38.31
469	93	0.17	9,038	16.77	**514**	110	0.20	14,149	26.26	**559**	161	0.30	20,802	38.60
470	85	0.16	9,123	16.93	**515**	117	0.22	14,266	26.47	**560**	200	0.37	21,002	38.98
471	78	0.14	9,201	17.08	**516**	120	0.22	14,386	26.70	**561**	190	0.35	21,192	39.33
472	119	0.22	9,320	17.30	**517**	126	0.23	14,512	26.93	**562**	186	0.35	21,378	39.67
473	114	0.21	9,434	17.51	**518**	131	0.24	14,643	27.17	**563**	164	0.30	21,542	39.98
474	86	0.16	9,520	17.67	**519**	133	0.25	14,776	27.42	**564**	154	0.29	21,696	40.26
475	105	0.19	9,625	17.86	**520**	117	0.22	14,893	27.64	**565**	172	0.32	21,868	40.58
476	110	0.20	9,735	18.07	**521**	150	0.28	15,043	27.92	**566**	151	0.28	22,019	40.86
477	92	0.17	9,827	18.24	**522**	146	0.27	15,189	28.19	**567**	180	0.33	22,199	41.20
478	113	0.21	9,940	18.45	**523**	111	0.21	15,300	28.39	**568**	166	0.31	22,365	41.51
479	109	0.20	10,049	18.65	**524**	159	0.30	15,459	28.69	**569**	174	0.32	22,539	41.83

Table 33. 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	175	0.32	22,714	42.15	**615**	214	0.40	31,018	57.56	**660**	147	0.27	39,105	72.57
571	165	0.31	22,879	42.46	**616**	181	0.34	31,199	57.90	**661**	179	0.33	39,284	72.90
572	208	0.39	23,087	42.84	**617**	194	0.36	31,393	58.26	**662**	171	0.32	39,455	73.22
573	182	0.34	23,269	43.18	**618**	169	0.31	31,562	58.57	**663**	190	0.35	39,645	73.57
574	189	0.35	23,458	43.53	**619**	183	0.34	31,745	58.91	**664**	158	0.29	39,803	73.87
575	184	0.34	23,642	43.87	**620**	211	0.39	31,956	59.30	**665**	167	0.31	39,970	74.18
576	156	0.29	23,798	44.16	**621**	203	0.38	32,159	59.68	**666**	163	0.30	40,133	74.48
577	167	0.31	23,965	44.47	**622**	173	0.32	32,332	60.00	**667**	152	0.28	40,285	74.76
578	173	0.32	24,138	44.80	**623**	170	0.32	32,502	60.32	**668**	196	0.36	40,481	75.12
579	193	0.36	24,331	45.15	**624**	180	0.33	32,682	60.65	**669**	159	0.30	40,640	75.42
580	173	0.32	24,504	45.47	**625**	192	0.36	32,874	61.01	**670**	171	0.32	40,811	75.74
581	191	0.35	24,695	45.83	**626**	206	0.38	33,080	61.39	**671**	154	0.29	40,965	76.02
582	172	0.32	24,867	46.15	**627**	187	0.35	33,267	61.74	**672**	149	0.28	41,114	76.30
583	183	0.34	25,050	46.49	**628**	198	0.37	33,465	62.10	**673**	145	0.27	41,259	76.57
584	176	0.33	25,226	46.81	**629**	160	0.30	33,625	62.40	**674**	187	0.35	41,446	76.92
585	170	0.32	25,396	47.13	**630**	187	0.35	33,812	62.75	**675**	147	0.27	41,593	77.19
586	171	0.32	25,567	47.45	**631**	181	0.34	33,993	63.08	**676**	139	0.26	41,732	77.45
587	178	0.33	25,745	47.78	**632**	204	0.38	34,197	63.46	**677**	152	0.28	41,884	77.73
588	210	0.39	25,955	48.17	**633**	195	0.36	34,392	63.82	**678**	151	0.28	42,035	78.01
589	184	0.34	26,139	48.51	**634**	168	0.31	34,560	64.14	**679**	166	0.31	42,201	78.32
590	159	0.30	26,298	48.80	**635**	158	0.29	34,718	64.43	**680**	145	0.27	42,346	78.59
591	191	0.35	26,489	49.16	**636**	187	0.35	34,905	64.78	**681**	134	0.25	42,480	78.83
592	175	0.32	26,664	49.48	**637**	186	0.35	35,091	65.12	**682**	148	0.27	42,628	79.11
593	192	0.36	26,856	49.84	**638**	176	0.33	35,267	65.45	**683**	149	0.28	42,777	79.39
594	181	0.34	27,037	50.18	**639**	196	0.36	35,463	65.81	**684**	161	0.30	42,938	79.68
595	180	0.33	27,217	50.51	**640**	192	0.36	35,655	66.17	**685**	144	0.27	43,082	79.95
596	164	0.30	27,381	50.81	**641**	201	0.37	35,856	66.54	**686**	145	0.27	43,227	80.22
597	203	0.38	27,584	51.19	**642**	182	0.34	36,038	66.88	**687**	153	0.28	43,380	80.50
598	180	0.33	27,764	51.52	**643**	198	0.37	36,236	67.25	**688**	157	0.29	43,537	80.80
599	222	0.41	27,986	51.94	**644**	193	0.36	36,429	67.61	**689**	137	0.25	43,674	81.05
600	168	0.31	28,154	52.25	**645**	181	0.34	36,610	67.94	**690**	125	0.23	43,799	81.28
601	199	0.37	28,353	52.62	**646**	155	0.29	36,765	68.23	**691**	141	0.26	43,940	81.54
602	177	0.33	28,530	52.95	**647**	161	0.30	36,926	68.53	**692**	119	0.22	44,059	81.76
603	193	0.36	28,723	53.30	**648**	163	0.30	37,089	68.83	**693**	156	0.29	44,215	82.05
604	182	0.34	28,905	53.64	**649**	182	0.34	37,271	69.17	**694**	149	0.28	44,364	82.33
605	190	0.35	29,095	53.99	**650**	164	0.30	37,435	69.47	**695**	150	0.28	44,514	82.61
606	182	0.34	29,277	54.33	**651**	164	0.30	37,599	69.78	**696**	143	0.27	44,657	82.87
607	194	0.36	29,471	54.69	**652**	184	0.34	37,783	70.12	**697**	125	0.23	44,782	83.11
608	205	0.38	29,676	55.07	**653**	191	0.35	37,974	70.47	**698**	133	0.25	44,915	83.35
609	216	0.40	29,892	55.47	**654**	144	0.27	38,118	70.74	**699**	133	0.25	45,048	83.60
610	163	0.30	30,055	55.78	**655**	166	0.31	38,284	71.05	**700**	133	0.25	45,181	83.85
611	174	0.32	30,229	56.10	**656**	161	0.30	38,445	71.35	**701**	126	0.23	45,307	84.08
612	185	0.34	30,414	56.44	**657**	187	0.35	38,632	71.69	**702**	135	0.25	45,442	84.33
613	193	0.36	30,607	56.80	**658**	162	0.30	38,794	71.99	**703**	135	0.25	45,577	84.58
614	197	0.37	30,804	57.17	**659**	164	0.30	38,958	72.30	**704**	135	0.25	45,712	84.83

Table 33. 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	116	0.22	45,828	85.05	**750**	72	0.13	50,301	93.35	**795**	30	0.06	52,636	97.68
706	121	0.22	45,949	85.27	**751**	75	0.14	50,376	93.49	**796**	17	0.03	52,653	97.71
707	117	0.22	46,066	85.49	**752**	83	0.15	50,459	93.64	**797**	34	0.06	52,687	97.78
708	136	0.25	46,202	85.74	**753**	66	0.12	50,525	93.76	**798**	35	0.06	52,722	97.84
709	136	0.25	46,338	85.99	**754**	66	0.12	50,591	93.89	**799**	34	0.06	52,756	97.90
710	115	0.21	46,453	86.21	**755**	72	0.13	50,663	94.02	**800**	29	0.05	52,785	97.96
711	122	0.23	46,575	86.43	**756**	78	0.14	50,741	94.17	**801**	25	0.05	52,810	98.01
712	126	0.23	46,701	86.67	**757**	57	0.11	50,798	94.27	**802**	25	0.05	52,835	98.05
713	112	0.21	46,813	86.88	**758**	65	0.12	50,863	94.39	**803**	29	0.05	52,864	98.11
714	103	0.19	46,916	87.07	**759**	61	0.11	50,924	94.50	**804**	31	0.06	52,895	98.16
715	109	0.20	47,025	87.27	**760**	56	0.10	50,980	94.61	**805**	30	0.06	52,925	98.22
716	114	0.21	47,139	87.48	**761**	61	0.11	51,041	94.72	**806**	25	0.05	52,950	98.26
717	100	0.19	47,239	87.67	**762**	66	0.12	51,107	94.84	**807**	31	0.06	52,981	98.32
718	114	0.21	47,353	87.88	**763**	63	0.12	51,170	94.96	**808**	24	0.04	53,005	98.37
719	93	0.17	47,446	88.05	**764**	55	0.10	51,225	95.06	**809**	29	0.05	53,034	98.42
720	120	0.22	47,566	88.27	**765**	40	0.07	51,265	95.14	**810**	25	0.05	53,059	98.47
721	97	0.18	47,663	88.45	**766**	59	0.11	51,324	95.25	**811**	30	0.06	53,089	98.52
722	100	0.19	47,763	88.64	**767**	62	0.12	51,386	95.36	**812**	23	0.04	53,112	98.57
723	95	0.18	47,858	88.82	**768**	56	0.10	51,442	95.47	**813**	29	0.05	53,141	98.62
724	95	0.18	47,953	88.99	**769**	51	0.09	51,493	95.56	**814**	21	0.04	53,162	98.66
725	103	0.19	48,056	89.18	**770**	61	0.11	51,554	95.67	**815**	30	0.06	53,192	98.71
726	101	0.19	48,157	89.37	**771**	51	0.09	51,605	95.77	**816**	16	0.03	53,208	98.74
727	129	0.24	48,286	89.61	**772**	44	0.08	51,649	95.85	**817**	13	0.02	53,221	98.77
728	104	0.19	48,390	89.80	**773**	59	0.11	51,708	95.96	**818**	22	0.04	53,243	98.81
729	85	0.16	48,475	89.96	**774**	43	0.08	51,751	96.04	**819**	18	0.03	53,261	98.84
730	107	0.20	48,582	90.16	**775**	52	0.10	51,803	96.14	**820**	15	0.03	53,276	98.87
731	100	0.19	48,682	90.34	**776**	44	0.08	51,847	96.22	**821**	15	0.03	53,291	98.90
732	100	0.19	48,782	90.53	**777**	51	0.09	51,898	96.31	**822**	13	0.02	53,304	98.92
733	99	0.18	48,881	90.71	**778**	46	0.09	51,944	96.40	**823**	18	0.03	53,322	98.96
734	103	0.19	48,984	90.90	**779**	50	0.09	51,994	96.49	**824**	18	0.03	53,340	98.99
735	82	0.15	49,066	91.06	**780**	42	0.08	52,036	96.57	**825**	18	0.03	53,358	99.02
736	63	0.12	49,129	91.17	**781**	34	0.06	52,070	96.63	**826**	15	0.03	53,373	99.05
737	104	0.19	49,233	91.37	**782**	50	0.09	52,120	96.72	**827**	14	0.03	53,387	99.08
738	92	0.17	49,325	91.54	**783**	56	0.10	52,176	96.83	**828**	15	0.03	53,402	99.10
739	101	0.19	49,426	91.72	**784**	47	0.09	52,223	96.92	**829**	16	0.03	53,418	99.13
740	71	0.13	49,497	91.86	**785**	42	0.08	52,265	96.99	**830**	15	0.03	53,433	99.16
741	86	0.16	49,583	92.02	**786**	42	0.08	52,307	97.07	**831**	12	0.02	53,445	99.18
742	83	0.15	49,666	92.17	**787**	41	0.08	52,348	97.15	**832**	21	0.04	53,466	99.22
743	76	0.14	49,742	92.31	**788**	43	0.08	52,391	97.23	**833**	11	0.02	53,477	99.24
744	91	0.17	49,833	92.48	**789**	35	0.06	52,426	97.29	**834**	8	0.01	53,485	99.26
745	70	0.13	49,903	92.61	**790**	34	0.06	52,460	97.36	**835**	11	0.02	53,496	99.28
746	92	0.17	49,995	92.78	**791**	26	0.05	52,486	97.40	**836**	16	0.03	53,512	99.31
747	69	0.13	50,064	92.91	**792**	44	0.08	52,530	97.49	**837**	8	0.01	53,520	99.32
748	86	0.16	50,150	93.07	**793**	36	0.07	52,566	97.55	**838**	15	0.03	53,535	99.35
749	79	0.15	50,229	93.22	**794**	40	0.07	52,606	97.63	**839**	8	0.01	53,543	99.37

Table 33. Grade 8 Cumulative Frequency Distribution of Scale Scores (Continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	6	0.01	53,549	99.38	**885**	2	0.00	53,819	99.88
841	10	0.02	53,559	99.40	**886**	4	0.01	53,823	99.88
842	7	0.01	53,566	99.41	**887**	1	0.00	53,824	99.89
843	7	0.01	53,573	99.42	**888**	3	0.01	53,827	99.89
844	5	0.01	53,578	99.43	**889**	1	0.00	53,828	99.89
845	8	0.01	53,586	99.45	**890**	1	0.00	53,829	99.90
846	7	0.01	53,593	99.46	**892**	1	0.00	53,830	99.90
847	12	0.02	53,605	99.48	**894**	2	0.00	53,832	99.90
848	9	0.02	53,614	99.50	**896**	3	0.01	53,835	99.91
849	10	0.02	53,624	99.52	**898**	1	0.00	53,836	99.91
850	16	0.03	53,640	99.55	**899**	1	0.00	53,837	99.91
851	11	0.02	53,651	99.57	**900**	48	0.09	53,885	100.00
852	7	0.01	53,658	99.58					
853	9	0.02	53,667	99.60					
854	1	0.00	53,668	99.60					
855	9	0.02	53,677	99.61					
856	7	0.01	53,684	99.63					
857	4	0.01	53,688	99.63					
858	8	0.01	53,696	99.65					
859	6	0.01	53,702	99.66					
860	2	0.00	53,704	99.66					
861	6	0.01	53,710	99.68					
862	6	0.01	53,716	99.69					
863	11	0.02	53,727	99.71					
864	8	0.01	53,735	99.72					
865	3	0.01	53,738	99.73					
866	7	0.01	53,745	99.74					
867	4	0.01	53,749	99.75					
868	6	0.01	53,755	99.76					
869	7	0.01	53,762	99.77					
870	6	0.01	53,768	99.78					
871	4	0.01	53,772	99.79					
872	5	0.01	53,777	99.80					
873	2	0.00	53,779	99.80					
874	7	0.01	53,786	99.82					
875	3	0.01	53,789	99.82					
876	5	0.01	53,794	99.83					
877	7	0.01	53,801	99.84					
878	1	0.00	53,802	99.85					
879	5	0.01	53,807	99.86					
880	4	0.01	53,811	99.86					
881	2	0.00	53,813	99.87					
882	1	0.00	53,814	99.87					
883	1	0.00	53,815	99.87					
884	2	0.00	53,817	99.87					

Table 34. HS Science Frequency Distribution of Scale Scores

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
300	727	2.11	727	2.11	**345**	12	0.03	1,061	3.09	**390**	19	0.06	1,748	5.08
301	3	0.01	730	2.12	**346**	13	0.04	1,074	3.12	**391**	23	0.07	1,771	5.15
302	3	0.01	733	2.13	**347**	7	0.02	1,081	3.14	**392**	22	0.06	1,793	5.21
303	4	0.01	737	2.14	**348**	11	0.03	1,092	3.18	**393**	17	0.05	1,810	5.26
304	7	0.02	744	2.16	**349**	10	0.03	1,102	3.21	**394**	26	0.08	1,836	5.34
305	3	0.01	747	2.17	**350**	10	0.03	1,112	3.23	**395**	31	0.09	1,867	5.43
306	1	0.00	748	2.18	**351**	13	0.04	1,125	3.27	**396**	16	0.05	1,883	5.48
307	5	0.01	753	2.19	**352**	13	0.04	1,138	3.31	**397**	20	0.06	1,903	5.53
308	4	0.01	757	2.20	**353**	15	0.04	1,153	3.35	**398**	21	0.06	1,924	5.60
309	6	0.02	763	2.22	**354**	11	0.03	1,164	3.39	**399**	24	0.07	1,948	5.67
310	5	0.01	768	2.23	**355**	10	0.03	1,174	3.41	**400**	25	0.07	1,973	5.74
311	5	0.01	773	2.25	**356**	15	0.04	1,189	3.46	**401**	26	0.08	1,999	5.81
312	8	0.02	781	2.27	**357**	13	0.04	1,202	3.50	**402**	20	0.06	2,019	5.87
313	9	0.03	790	2.30	**358**	8	0.02	1,210	3.52	**403**	32	0.09	2,051	5.97
314	6	0.02	796	2.32	**359**	5	0.01	1,215	3.53	**404**	35	0.10	2,086	6.07
315	8	0.02	804	2.34	**360**	12	0.03	1,227	3.57	**405**	24	0.07	2,110	6.14
316	8	0.02	812	2.36	**361**	11	0.03	1,238	3.60	**406**	29	0.08	2,139	6.22
317	4	0.01	816	2.37	**362**	15	0.04	1,253	3.64	**407**	27	0.08	2,166	6.30
318	7	0.02	823	2.39	**363**	12	0.03	1,265	3.68	**408**	25	0.07	2,191	6.37
319	6	0.02	829	2.41	**364**	13	0.04	1,278	3.72	**409**	26	0.08	2,217	6.45
320	6	0.02	835	2.43	**365**	20	0.06	1,298	3.78	**410**	32	0.09	2,249	6.54
321	6	0.02	841	2.45	**366**	15	0.04	1,313	3.82	**411**	37	0.11	2,286	6.65
322	6	0.02	847	2.46	**367**	14	0.04	1,327	3.86	**412**	19	0.06	2,305	6.70
323	6	0.02	853	2.48	**368**	21	0.06	1,348	3.92	**413**	24	0.07	2,329	6.77
324	8	0.02	861	2.50	**369**	11	0.03	1,359	3.95	**414**	25	0.07	2,354	6.85
325	9	0.03	870	2.53	**370**	17	0.05	1,376	4.00	**415**	29	0.08	2,383	6.93
326	8	0.02	878	2.55	**371**	18	0.05	1,394	4.05	**416**	22	0.06	2,405	6.99
327	7	0.02	885	2.57	**372**	11	0.03	1,405	4.09	**417**	34	0.10	2,439	7.09
328	6	0.02	891	2.59	**373**	20	0.06	1,425	4.14	**418**	25	0.07	2,464	7.17
329	10	0.03	901	2.62	**374**	23	0.07	1,448	4.21	**419**	37	0.11	2,501	7.27
330	6	0.02	907	2.64	**375**	11	0.03	1,459	4.24	**420**	35	0.10	2,536	7.38
331	11	0.03	918	2.67	**376**	26	0.08	1,485	4.32	**421**	25	0.07	2,561	7.45
332	15	0.04	933	2.71	**377**	13	0.04	1,498	4.36	**422**	23	0.07	2,584	7.52
333	13	0.04	946	2.75	**378**	11	0.03	1,509	4.39	**423**	36	0.10	2,620	7.62
334	5	0.01	951	2.77	**379**	23	0.07	1,532	4.46	**424**	47	0.14	2,667	7.76
335	2	0.01	953	2.77	**380**	21	0.06	1,553	4.52	**425**	36	0.10	2,703	7.86
336	13	0.04	966	2.81	**381**	20	0.06	1,573	4.57	**426**	26	0.08	2,729	7.94
337	9	0.03	975	2.84	**382**	21	0.06	1,594	4.64	**427**	32	0.09	2,761	8.03
338	7	0.02	982	2.86	**383**	15	0.04	1,609	4.68	**428**	47	0.14	2,808	8.17
339	5	0.01	987	2.87	**384**	20	0.06	1,629	4.74	**429**	38	0.11	2,846	8.28
340	9	0.03	996	2.90	**385**	25	0.07	1,654	4.81	**430**	32	0.09	2,878	8.37
341	14	0.04	1,010	2.94	**386**	19	0.06	1,673	4.87	**431**	28	0.08	2,906	8.45
342	13	0.04	1,023	2.98	**387**	18	0.05	1,691	4.92	**432**	34	0.10	2,940	8.55
343	12	0.03	1,035	3.01	**388**	20	0.06	1,711	4.98	**433**	40	0.12	2,980	8.67
344	14	0.04	1,049	3.05	**389**	18	0.05	1,729	5.03	**434**	33	0.10	3,013	8.76

Table 34. 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	37	0.11	3,050	8.87	**480**	52	0.15	5,263	15.31	**525**	80	0.23	8,501	24.72
436	41	0.12	3,091	8.99	**481**	55	0.16	5,318	15.47	**526**	82	0.24	8,583	24.96
437	44	0.13	3,135	9.12	**482**	56	0.16	5,374	15.63	**527**	88	0.26	8,671	25.22
438	37	0.11	3,172	9.23	**483**	68	0.20	5,442	15.83	**528**	92	0.27	8,763	25.49
439	38	0.11	3,210	9.34	**484**	62	0.18	5,504	16.01	**529**	92	0.27	8,855	25.75
440	35	0.10	3,245	9.44	**485**	62	0.18	5,566	16.19	**530**	75	0.22	8,930	25.97
441	31	0.09	3,276	9.53	**486**	72	0.21	5,638	16.40	**531**	83	0.24	9,013	26.21
442	53	0.15	3,329	9.68	**487**	56	0.16	5,694	16.56	**532**	116	0.34	9,129	26.55
443	39	0.11	3,368	9.80	**488**	68	0.20	5,762	16.76	**533**	80	0.23	9,209	26.78
444	39	0.11	3,407	9.91	**489**	68	0.20	5,830	16.96	**534**	82	0.24	9,291	27.02
445	35	0.10	3,442	10.01	**490**	54	0.16	5,884	17.11	**535**	106	0.31	9,397	27.33
446	49	0.14	3,491	10.15	**491**	64	0.19	5,948	17.30	**536**	96	0.28	9,493	27.61
447	43	0.13	3,534	10.28	**492**	57	0.17	6,005	17.47	**537**	113	0.33	9,606	27.94
448	49	0.14	3,583	10.42	**493**	85	0.25	6,090	17.71	**538**	79	0.23	9,685	28.17
449	34	0.10	3,617	10.52	**494**	56	0.16	6,146	17.88	**539**	101	0.29	9,786	28.46
450	36	0.10	3,653	10.62	**495**	80	0.23	6,226	18.11	**540**	119	0.35	9,905	28.81
451	43	0.13	3,696	10.75	**496**	67	0.19	6,293	18.30	**541**	101	0.29	10,006	29.10
452	46	0.13	3,742	10.88	**497**	66	0.19	6,359	18.49	**542**	111	0.32	10,117	29.42
453	42	0.12	3,784	11.01	**498**	75	0.22	6,434	18.71	**543**	105	0.31	10,222	29.73
454	41	0.12	3,825	11.12	**499**	67	0.19	6,501	18.91	**544**	126	0.37	10,348	30.10
455	47	0.14	3,872	11.26	**500**	59	0.17	6,560	19.08	**545**	97	0.28	10,445	30.38
456	44	0.13	3,916	11.39	**501**	67	0.19	6,627	19.27	**546**	82	0.24	10,527	30.62
457	49	0.14	3,965	11.53	**502**	73	0.21	6,700	19.49	**547**	102	0.30	10,629	30.91
458	48	0.14	4,013	11.67	**503**	83	0.24	6,783	19.73	**548**	105	0.31	10,734	31.22
459	37	0.11	4,050	11.78	**504**	61	0.18	6,844	19.91	**549**	112	0.33	10,846	31.54
460	47	0.14	4,097	11.92	**505**	77	0.22	6,921	20.13	**550**	110	0.32	10,956	31.86
461	46	0.13	4,143	12.05	**506**	74	0.22	6,995	20.34	**551**	119	0.35	11,075	32.21
462	55	0.16	4,198	12.21	**507**	71	0.21	7,066	20.55	**552**	105	0.31	11,180	32.52
463	49	0.14	4,247	12.35	**508**	65	0.19	7,131	20.74	**553**	101	0.29	11,281	32.81
464	41	0.12	4,288	12.47	**509**	78	0.23	7,209	20.97	**554**	127	0.37	11,408	33.18
465	61	0.18	4,349	12.65	**510**	83	0.24	7,292	21.21	**555**	107	0.31	11,515	33.49
466	51	0.15	4,400	12.80	**511**	75	0.22	7,367	21.43	**556**	127	0.37	11,642	33.86
467	60	0.17	4,460	12.97	**512**	72	0.21	7,439	21.64	**557**	117	0.34	11,759	34.20
468	65	0.19	4,525	13.16	**513**	81	0.24	7,520	21.87	**558**	119	0.35	11,878	34.55
469	66	0.19	4,591	13.35	**514**	96	0.28	7,616	22.15	**559**	104	0.30	11,982	34.85
470	56	0.16	4,647	13.52	**515**	80	0.23	7,696	22.38	**560**	102	0.30	12,084	35.15
471	57	0.17	4,704	13.68	**516**	72	0.21	7,768	22.59	**561**	122	0.35	12,206	35.50
472	80	0.23	4,784	13.91	**517**	83	0.24	7,851	22.83	**562**	110	0.32	12,316	35.82
473	57	0.17	4,841	14.08	**518**	65	0.19	7,916	23.02	**563**	124	0.36	12,440	36.18
474	52	0.15	4,893	14.23	**519**	73	0.21	7,989	23.24	**564**	115	0.33	12,555	36.52
475	60	0.17	4,953	14.41	**520**	78	0.23	8,067	23.46	**565**	116	0.34	12,671	36.85
476	56	0.16	5,009	14.57	**521**	96	0.28	8,163	23.74	**566**	135	0.39	12,806	37.25
477	66	0.19	5,075	14.76	**522**	98	0.29	8,261	24.03	**567**	141	0.41	12,947	37.66
478	78	0.23	5,153	14.99	**523**	76	0.22	8,337	24.25	**568**	102	0.30	13,049	37.95
479	58	0.17	5,211	15.16	**524**	84	0.24	8,421	24.49	**569**	112	0.33	13,161	38.28

Table 34. 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	126	0.37	13,287	38.64	**615**	139	0.40	18,972	55.18	**660**	123	0.36	24,710	71.87
571	92	0.27	13,379	38.91	**616**	129	0.38	19,101	55.55	**661**	103	0.30	24,813	72.17
572	129	0.38	13,508	39.29	**617**	134	0.39	19,235	55.94	**662**	124	0.36	24,937	72.53
573	126	0.37	13,634	39.65	**618**	124	0.36	19,359	56.30	**663**	117	0.34	25,054	72.87
574	114	0.33	13,748	39.98	**619**	112	0.33	19,471	56.63	**664**	127	0.37	25,181	73.24
575	132	0.38	13,880	40.37	**620**	137	0.40	19,608	57.03	**665**	118	0.34	25,299	73.58
576	149	0.43	14,029	40.80	**621**	127	0.37	19,735	57.40	**666**	113	0.33	25,412	73.91
577	113	0.33	14,142	41.13	**622**	141	0.41	19,876	57.81	**667**	98	0.29	25,510	74.19
578	131	0.38	14,273	41.51	**623**	130	0.38	20,006	58.19	**668**	105	0.31	25,615	74.50
579	117	0.34	14,390	41.85	**624**	132	0.38	20,138	58.57	**669**	110	0.32	25,725	74.82
580	109	0.32	14,499	42.17	**625**	148	0.43	20,286	59.00	**670**	96	0.28	25,821	75.10
581	116	0.34	14,615	42.51	**626**	115	0.33	20,401	59.33	**671**	121	0.35	25,942	75.45
582	112	0.33	14,727	42.83	**627**	132	0.38	20,533	59.72	**672**	100	0.29	26,042	75.74
583	119	0.35	14,846	43.18	**628**	121	0.35	20,654	60.07	**673**	122	0.35	26,164	76.10
584	125	0.36	14,971	43.54	**629**	102	0.30	20,756	60.37	**674**	80	0.23	26,244	76.33
585	123	0.36	15,094	43.90	**630**	127	0.37	20,883	60.74	**675**	104	0.30	26,348	76.63
586	143	0.42	15,237	44.32	**631**	120	0.35	21,003	61.09	**676**	114	0.33	26,462	76.96
587	126	0.37	15,363	44.68	**632**	132	0.38	21,135	61.47	**677**	117	0.34	26,579	77.30
588	136	0.40	15,499	45.08	**633**	135	0.39	21,270	61.86	**678**	100	0.29	26,679	77.59
589	106	0.31	15,605	45.39	**634**	139	0.40	21,409	62.27	**679**	96	0.28	26,775	77.87
590	135	0.39	15,740	45.78	**635**	108	0.31	21,517	62.58	**680**	106	0.31	26,881	78.18
591	108	0.31	15,848	46.09	**636**	143	0.42	21,660	63.00	**681**	102	0.30	26,983	78.48
592	120	0.35	15,968	46.44	**637**	133	0.39	21,793	63.38	**682**	87	0.25	27,070	78.73
593	114	0.33	16,082	46.77	**638**	136	0.40	21,929	63.78	**683**	88	0.26	27,158	78.99
594	126	0.37	16,208	47.14	**639**	133	0.39	22,062	64.17	**684**	102	0.30	27,260	79.28
595	125	0.36	16,333	47.50	**640**	135	0.39	22,197	64.56	**685**	90	0.26	27,350	79.55
596	136	0.40	16,469	47.90	**641**	148	0.43	22,345	64.99	**686**	101	0.29	27,451	79.84
597	146	0.42	16,615	48.32	**642**	130	0.38	22,475	65.37	**687**	117	0.34	27,568	80.18
598	137	0.40	16,752	48.72	**643**	111	0.32	22,586	65.69	**688**	101	0.29	27,669	80.47
599	149	0.43	16,901	49.16	**644**	125	0.36	22,711	66.05	**689**	82	0.24	27,751	80.71
600	108	0.31	17,009	49.47	**645**	124	0.36	22,835	66.41	**690**	91	0.26	27,842	80.98
601	144	0.42	17,153	49.89	**646**	118	0.34	22,953	66.76	**691**	98	0.29	27,940	81.26
602	146	0.42	17,299	50.31	**647**	129	0.38	23,082	67.13	**692**	91	0.26	28,031	81.53
603	135	0.39	17,434	50.71	**648**	124	0.36	23,206	67.49	**693**	106	0.31	28,137	81.83
604	126	0.37	17,560	51.07	**649**	129	0.38	23,335	67.87	**694**	102	0.30	28,239	82.13
605	140	0.41	17,700	51.48	**650**	125	0.36	23,460	68.23	**695**	92	0.27	28,331	82.40
606	140	0.41	17,840	51.89	**651**	142	0.41	23,602	68.64	**696**	90	0.26	28,421	82.66
607	126	0.37	17,966	52.25	**652**	138	0.40	23,740	69.05	**697**	100	0.29	28,521	82.95
608	121	0.35	18,087	52.60	**653**	134	0.39	23,874	69.44	**698**	85	0.25	28,606	83.20
609	128	0.37	18,215	52.98	**654**	115	0.33	23,989	69.77	**699**	80	0.23	28,686	83.43
610	118	0.34	18,333	53.32	**655**	124	0.36	24,113	70.13	**700**	104	0.30	28,790	83.73
611	141	0.41	18,474	53.73	**656**	124	0.36	24,237	70.49	**701**	97	0.28	28,887	84.02
612	114	0.33	18,588	54.06	**657**	115	0.33	24,352	70.83	**702**	98	0.29	28,985	84.30
613	135	0.39	18,723	54.45	**658**	124	0.36	24,476	71.19	**703**	87	0.25	29,072	84.55
614	110	0.32	18,833	54.77	**659**	111	0.32	24,587	71.51	**704**	96	0.28	29,168	84.83

Table 34. 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	84	0.24	29,252	85.08	**750**	47	0.14	32,282	93.89	**795**	20	0.06	33,773	98.23
706	97	0.28	29,349	85.36	**751**	43	0.13	32,325	94.01	**796**	16	0.05	33,789	98.27
707	68	0.20	29,417	85.56	**752**	55	0.16	32,380	94.17	**797**	16	0.05	33,805	98.32
708	78	0.23	29,495	85.78	**753**	43	0.13	32,423	94.30	**798**	18	0.05	33,823	98.37
709	92	0.27	29,587	86.05	**754**	36	0.10	32,459	94.40	**799**	13	0.04	33,836	98.41
710	98	0.29	29,685	86.34	**755**	58	0.17	32,517	94.57	**800**	16	0.05	33,852	98.46
711	89	0.26	29,774	86.60	**756**	38	0.11	32,555	94.68	**801**	14	0.04	33,866	98.50
712	93	0.27	29,867	86.87	**757**	50	0.15	32,605	94.83	**802**	27	0.08	33,893	98.57
713	82	0.24	29,949	87.10	**758**	33	0.10	32,638	94.92	**803**	17	0.05	33,910	98.62
714	80	0.23	30,029	87.34	**759**	41	0.12	32,679	95.04	**804**	12	0.03	33,922	98.66
715	91	0.26	30,120	87.60	**760**	44	0.13	32,723	95.17	**805**	17	0.05	33,939	98.71
716	81	0.24	30,201	87.84	**761**	43	0.13	32,766	95.30	**806**	17	0.05	33,956	98.76
717	85	0.25	30,286	88.08	**762**	43	0.13	32,809	95.42	**807**	9	0.03	33,965	98.78
718	76	0.22	30,362	88.31	**763**	31	0.09	32,840	95.51	**808**	9	0.03	33,974	98.81
719	72	0.21	30,434	88.51	**764**	39	0.11	32,879	95.63	**809**	17	0.05	33,991	98.86
720	64	0.19	30,498	88.70	**765**	34	0.10	32,913	95.72	**810**	13	0.04	34,004	98.90
721	69	0.20	30,567	88.90	**766**	32	0.09	32,945	95.82	**811**	15	0.04	34,019	98.94
722	64	0.19	30,631	89.09	**767**	42	0.12	32,987	95.94	**812**	8	0.02	34,027	98.96
723	66	0.19	30,697	89.28	**768**	29	0.08	33,016	96.02	**813**	13	0.04	34,040	99.00
724	75	0.22	30,772	89.50	**769**	33	0.10	33,049	96.12	**814**	16	0.05	34,056	99.05
725	66	0.19	30,838	89.69	**770**	23	0.07	33,072	96.19	**815**	12	0.03	34,068	99.08
726	63	0.18	30,901	89.87	**771**	38	0.11	33,110	96.30	**816**	8	0.02	34,076	99.11
727	71	0.21	30,972	90.08	**772**	44	0.13	33,154	96.43	**817**	13	0.04	34,089	99.14
728	78	0.23	31,050	90.31	**773**	38	0.11	33,192	96.54	**818**	12	0.03	34,101	99.18
729	59	0.17	31,109	90.48	**774**	31	0.09	33,223	96.63	**819**	5	0.01	34,106	99.19
730	61	0.18	31,170	90.66	**775**	34	0.10	33,257	96.73	**820**	6	0.02	34,112	99.21
731	62	0.18	31,232	90.84	**776**	29	0.08	33,286	96.81	**821**	4	0.01	34,116	99.22
732	59	0.17	31,291	91.01	**777**	36	0.10	33,322	96.91	**822**	6	0.02	34,122	99.24
733	62	0.18	31,353	91.19	**778**	35	0.10	33,357	97.02	**823**	7	0.02	34,129	99.26
734	62	0.18	31,415	91.37	**779**	33	0.10	33,390	97.11	**824**	8	0.02	34,137	99.28
735	60	0.17	31,475	91.54	**780**	31	0.09	33,421	97.20	**825**	6	0.02	34,143	99.30
736	57	0.17	31,532	91.71	**781**	30	0.09	33,451	97.29	**826**	11	0.03	34,154	99.33
737	62	0.18	31,594	91.89	**782**	23	0.07	33,474	97.36	**827**	2	0.01	34,156	99.34
738	62	0.18	31,656	92.07	**783**	17	0.05	33,491	97.41	**828**	6	0.02	34,162	99.36
739	54	0.16	31,710	92.23	**784**	32	0.09	33,523	97.50	**829**	9	0.03	34,171	99.38
740	49	0.14	31,759	92.37	**785**	24	0.07	33,547	97.57	**830**	11	0.03	34,182	99.42
741	51	0.15	31,810	92.52	**786**	22	0.06	33,569	97.63	**831**	6	0.02	34,188	99.43
742	68	0.20	31,878	92.71	**787**	24	0.07	33,593	97.70	**832**	7	0.02	34,195	99.45
743	46	0.13	31,924	92.85	**788**	22	0.06	33,615	97.77	**833**	7	0.02	34,202	99.47
744	56	0.16	31,980	93.01	**789**	26	0.08	33,641	97.84	**834**	6	0.02	34,208	99.49
745	56	0.16	32,036	93.17	**790**	25	0.07	33,666	97.91	**835**	7	0.02	34,215	99.51
746	50	0.15	32,086	93.32	**791**	24	0.07	33,690	97.98	**836**	6	0.02	34,221	99.53
747	52	0.15	32,138	93.47	**792**	24	0.07	33,714	98.05	**837**	10	0.03	34,231	99.56
748	50	0.15	32,188	93.62	**793**	20	0.06	33,734	98.11	**838**	5	0.01	34,236	99.57
749	47	0.14	32,235	93.75	**794**	19	0.06	33,753	98.17	**839**	3	0.01	34,239	99.58

Table 34. HS Science Cumulative Frequency Distribution of Scale Scores (continued)

SS	Freq	%	Cum Freq	Cum %	SS	Freq	%	Cum Freq	Cum %
840	3	0.01	34,242	99.59	**891**	4	0.01	34,362	99.94
841	8	0.02	34,250	99.61	**893**	1	0.00	34,363	99.94
842	3	0.01	34,253	99.62	**894**	1	0.00	34,364	99.94
843	6	0.02	34,259	99.64	**895**	1	0.00	34,365	99.95
844	5	0.01	34,264	99.65	**896**	1	0.00	34,366	99.95
845	7	0.02	34,271	99.67	**897**	1	0.00	34,367	99.95
846	5	0.01	34,276	99.69	**900**	16	0.05	34,383	100.00
847	3	0.01	34,279	99.70					
848	4	0.01	34,283	99.71					
849	2	0.01	34,285	99.71					
850	1	0.00	34,286	99.72					
851	5	0.01	34,291	99.73					
852	2	0.01	34,293	99.74					
853	3	0.01	34,296	99.75					
854	2	0.01	34,298	99.75					
856	2	0.01	34,300	99.76					
857	6	0.02	34,306	99.78					
858	3	0.01	34,309	99.78					
859	3	0.01	34,312	99.79					
860	1	0.00	34,313	99.80					
861	2	0.01	34,315	99.80					
864	2	0.01	34,317	99.81					
865	2	0.01	34,319	99.81					
866	2	0.01	34,321	99.82					
867	3	0.01	34,324	99.83					
868	3	0.01	34,327	99.84					
869	1	0.00	34,328	99.84					
871	5	0.01	34,333	99.85					
872	1	0.00	34,334	99.86					
873	1	0.00	34,335	99.86					
874	2	0.01	34,337	99.87					
876	2	0.01	34,339	99.87					
877	3	0.01	34,342	99.88					
878	2	0.01	34,344	99.89					
879	1	0.00	34,345	99.89					
880	1	0.00	34,346	99.89					
881	1	0.00	34,347	99.90					
882	1	0.00	34,348	99.90					
883	1	0.00	34,349	99.90					
884	2	0.01	34,351	99.91					
885	2	0.01	34,353	99.91					
886	1	0.00	34,354	99.92					
888	1	0.00	34,355	99.92					
889	2	0.01	34,357	99.92					
890	1	0.00	34,358	99.93					

Table 35. Scale Score Performance Summary

Content Area	Grade	N	Mean	SD	Median
Social Studies	4	21,447	613	115.9	626
	7	19,886	600	112.0	613
	HS	n/a	n/a	n/a	n/a
Science	5	61,845	597	111.7	605
	8	53,885	584	119.0	594
	HS	34,383	593	110.7	602

Table 36. Performance Level Distribution

Content Area	Grade	Limited Command	Moderate Command	Strong Command	Distinguished Command
Social Studies	4	27.3%	48.8%	20.3%	3.6%
	7	42.4%	39.4%	14.3%	3.9%
	HS	n/a	n/a	n/a	n/a
Science	5	29.6%	36.7%	29.3%	4.5%
	8	37.1%	32.6%	27.2%	3.1%
	HS	29.4%	46.3%	20.8%	3.5%

*Percentages may not sum to 100 due to rounding.

Table 37. 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	611	132.4	624	615	132.4	629	612	129.7	624	604	141.1	628
	7	601	125.6	613	599	129.2	616	598	132.8	611	596	129.5	611
	HS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Science	5	596	127.2	606	598	120.3	605	597	121.5	604	594	122.9	605
	8	582	130.7	593	580	131.0	592	586	126.5	594	584	130.9	595
	HS	588	123.3	598	588	124.8	602	590	121.5	603	585	131.5	603

*Mdn = median

Table 38. Scale Score Performance Summary by Item Type

Content Area	Grade	Selected-Response		Constructed-Response	
		Mean	SD	Mean	SD
Social Studies	4	614	123.0	611	125.1
	7	599	123.0	600	119.7
	HS	n/a	n/a	n/a	n/a
Science	5	600	116.6	595	120.9
	8	585	123.7	583	125.0
	HS	593	115.3	586	126.1

Table 39. Grade 4 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
History	1	4.2	2.2	41.6%
	2	3.9	2.0	43.6%
Geography	1	5.8	2.1	53.0%
	2	3.9	2.0	43.5%
Economics	1	3.8	2.0	41.9%
	2	4.2	2.0	53.1%
Civics	1	4.1	2.4	45.2%
	2	4.0	2.3	39.9%

Table 40. Grade 5 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
Physical Science	1	9.4	4.5	47.1%
Life Science	1	7.0	2.7	53.8%
	2	9.2	3.9	53.9%
Earth Systems Science	1	5.9	2.4	58.6%
	2	4.3	2.0	47.4%
	3	4.5	2.0	41.3%

Table 41. Grade 7 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
History	1	3.7	2.0	46.2%
	2	6.2	3.1	52.0%
Geography	1	4.5	2.4	45.5%
	2	4.3	1.9	54.0%
Economics	1	4.0	2.1	50.6%
	2	3.5	1.9	44.1%
Civics	1	3.9	2.3	43.0%
	2	4.1	2.0	45.3%

Table 42. Grade 8 Percent Correct Performance Summary by GLE

Content Standard	GLE	Mean	SD	Average Percent Correct
Physical Science	1	3.4	1.8	48.8%
	2	2.3	1.8	32.3%
	3	3.3	1.8	47.5%
	4	3.5	2.0	43.3%
Life Science	1	4.7	2.4	42.7%
	2	5.1	3.3	39.6%
Earth Systems Science	1	4.6	1.8	65.8%
	2	3.0	1.9	42.3%
	3	3.7	1.8	52.4%
	4	3.1	1.6	51.3%

Table 43. HS Science Percent Correct Performance Summary by PGC

Content Standard	PGC	Mean	SD	Average Percent Correct
Physical Science	1	2.6	1.5	43.3%
	2	4.3	2.8	33.3%
	3	2.5	1.9	35.4%
Life Science	1	2.6	2.1	26.3%
	2	3.2	2.0	46.1%
	3	1.9	1.6	26.5%
	4	n/a	n/a	n/a
Earth Systems Science	1	2.5	1.9	31.6%
	2	5.6	3.1	43.1%
	3	2.2	1.7	37.1%

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

Table 44. Grade 4 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.07	0.61	0.44
2	0.06	0.85	0.38
3	0.99	0.48	0.21
4	0.10	0.61	0.42
5	1.20	0.38	0.32
6	1.39	0.54	0.28
7	0.08	0.72	0.48
8	0.09	0.55	0.35
9	0.12	0.40	0.52
10	0.36	0.30	0.21
11	0.36	0.49	0.20
12	0.29	0.53	0.36
13	1.46	0.28	0.20
14	0.50	0.53	0.37
15	0.92	0.59	0.37
16	0.08	0.68	0.48
17	0.04	0.73	0.49
18	0.08	0.48	0.38
19	0.85	0.54	0.46
20	0.48	0.39	0.32
21	0.15	0.43	0.31
22	1.44	0.66	0.43
23	0.42	0.48	0.36
24	0.05	0.84	0.37
25	0.12	0.57	0.30
26	1.30	0.72	0.49
27	0.64	0.33	0.23
28	0.03	0.32	0.29
29	0.04	0.43	0.25
30	1.37	0.45	0.45
31	0.06	0.74	0.39
32	0.81	0.42	0.29
33	2.11	0.34	0.26
34	0.04	0.46	0.40
35	2.35	0.47	0.32
36	1.91	0.45	0.36
37	2.78	0.52	0.36
38	3.33	0.44	0.43
39	0.09	0.36	0.38

Table 45. Grade 4 Constructed-Response Classical Statistics

Item	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	2.75	36.23	15.39	16.44	29.19	0.45	0.59
2	1.12	32.05	35.52	25.77	5.54	0.35	0.64
3	1.61	42.35	32.19	20.23	3.62	0.28	0.70
4	1.33	36.21	37.62	20.40	4.44	0.31	0.55
5	2.42	23.76	45.48	23.70	4.64	0.36	0.59
6	1.40	27.83	37.97	25.43	7.37	0.37	0.59
7	2.89	35.38	30.12	24.00	7.60	0.34	0.52
8	2.11	52.02	25.70	12.29	7.88	0.25	0.61
9	1.76	37.39	20.94	16.16	23.75	0.42	0.58
10	0.28	11.53	35.16	30.88	22.14	0.54	0.62
11	2.74	20.19	25.86	26.83	24.38	0.51	0.56
12	0.67	24.54	27.43	34.61	12.75	0.45	0.54

Table 46. Grade 5 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.02	0.70	0.54
2	0.04	0.66	0.45
3	0.33	0.67	0.45
4	1.04	0.48	0.53
5	0.12	0.71	0.49
6	0.34	0.55	0.37
7	0.45	0.40	0.43
8	1.67	0.51	0.38
9	0.06	0.74	0.42
10	0.02	0.85	0.39
11	0.70	0.33	0.47
12	0.43	0.43	0.18
13	0.02	0.59	0.24
14	0.10	0.85	0.22
15	0.10	0.53	0.54
16	0.11	0.57	0.36
17	0.08	0.64	0.42
18	0.04	0.74	0.45
19	0.01	0.83	0.37
20	0.04	0.73	0.48
21	0.00	0.24	0.46
22	0.38	0.84	0.21
23	0.25	0.63	0.37
24	0.03	0.58	0.35
25	0.12	0.35	0.38
26	0.00	0.52	0.45
27	0.15	0.53	0.40
28	0.00	0.81	0.44
29	0.06	0.33	0.38
30	2.36	0.81	0.41
31	0.07	0.44	0.20
32	0.05	0.65	0.40
33	0.06	0.79	0.52
34	0.88	0.67	0.47
35	1.50	0.39	0.32
36	0.26	0.87	0.31
37	0.36	0.64	0.52
38	0.00	0.58	0.42
39	0.03	0.67	0.49
40	0.80	0.61	0.52
41	0.00	0.67	0.49
42	0.79	0.70	0.55
43	0.07	0.33	0.27

Table 47. Grade 5 Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	3	1.27	35.38	19.74	36.44	7.17	0.38	0.58
2	2	0.51	28.06	49.38	22.04	0.00	0.47	0.56
3	2	1.05	9.34	56.69	32.92	0.00	0.61	0.54
4	2	1.20	32.86	47.63	18.31	0.00	0.42	0.62
5	2	2.08	32.49	43.80	21.63	0.00	0.44	0.52
6	3	0.54	30.08	30.38	22.45	16.55	0.42	0.55
7	2	1.28	56.53	24.31	17.88	0.00	0.30	0.57
8	2	1.39	50.15	42.13	6.34	0.00	0.27	0.32
9	2	0.36	17.82	47.76	34.06	0.00	0.58	0.57
10	2	1.81	67.25	21.34	9.61	0.00	0.20	0.41
11	2	0.71	34.14	32.93	32.22	0.00	0.49	0.57
12	2	0.57	28.20	20.49	50.74	0.00	0.61	0.65
13	2	3.30	91.61	3.23	1.86	0.00	0.03	0.23
14	3	1.14	41.19	30.11	18.11	9.45	0.32	0.57
15	2	1.69	54.94	27.65	15.72	0.00	0.30	0.64
16	2	1.80	34.87	27.64	35.69	0.00	0.50	0.52
17	2	3.76	67.67	17.79	10.78	0.00	0.20	0.51

Table 48. Grade 7 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.03	0.56	0.34
2	0.67	0.43	0.31
3	0.23	0.45	0.34
4	1.29	0.34	0.33
5	0.04	0.56	0.35
6	0.12	0.44	0.32
7	0.53	0.43	0.46
8	0.50	0.46	0.36
9	0.19	0.70	0.32
10	1.00	0.64	0.50
11	0.05	0.38	0.40
12	0.06	0.59	0.47
13	0.06	0.40	0.41
14	0.21	0.65	0.50
15	0.22	0.45	0.25
16	0.28	0.52	0.46
17	0.02	0.54	0.31
18	0.02	0.77	0.55
19	0.02	0.67	0.51
20	0.22	0.58	0.54
21	0.04	0.61	0.52
22	0.04	0.33	0.39
23	0.01	0.16	0.35
24	0.02	0.66	0.48
25	1.07	0.63	0.33
26	1.24	0.65	0.50
27	0.08	0.48	0.32
28	0.06	0.84	0.39
29	0.02	0.27	0.49
30	0.55	0.44	0.53
31	0.45	0.54	0.49
32	0.38	0.30	0.34
33	0.21	0.50	0.56
34	0.02	0.60	0.45
35	0.13	0.34	0.20
36	0.02	0.71	0.35

Table 49. Grade 7 Constructed-Response Classical Statistics

Item	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	1.37	40.90	36.48	14.99	6.26	0.28	0.65
2	0.84	13.30	10.90	50.82	24.14	0.62	0.65
3	0.43	18.49	41.84	26.16	13.07	0.44	0.64
4	0.83	27.27	22.23	40.68	9.00	0.44	0.65
5	0.75	22.14	34.09	34.73	8.29	0.43	0.51
6	0.54	16.46	46.86	26.18	9.97	0.43	0.66
7	0.98	30.68	34.44	20.55	13.36	0.39	0.65
8	0.85	15.96	19.34	30.59	33.27	0.60	0.62
9	1.28	29.30	28.83	28.75	11.83	0.41	0.60
10	0.77	25.75	14.81	16.24	42.43	0.58	0.68
11	1.85	50.64	13.86	15.87	17.78	0.33	0.63
12	3.80	46.07	26.84	15.39	7.90	0.27	0.67

Table 50. Grade 8 Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.03	0.50	0.30
2	0.04	0.58	0.41
3	0.01	0.82	0.34
4	0.14	0.47	0.33
5	0.15	0.64	0.41
6	0.07	0.47	0.29
7	0.04	0.65	0.37
8	0.10	0.63	0.46
9	0.28	0.22	0.48
10	0.14	0.51	0.31
11	0.03	0.40	0.34
12	0.00	0.24	0.58
13	0.06	0.57	0.44
14	0.06	0.35	0.42
15	0.06	0.74	0.40
16	0.04	0.70	0.45
17	0.09	0.62	0.35
18	0.27	0.19	0.21
19	0.20	0.46	0.28
20	0.03	0.84	0.37
21	0.47	0.55	0.62
22	0.07	0.33	0.32
23	0.00	0.72	0.35
24	0.00	0.84	0.34
25	0.19	0.38	0.60
26	0.11	0.31	0.34
27	0.02	0.65	0.29
28	0.18	0.41	0.32
29	0.02	0.65	0.51
30	0.22	0.76	0.50
31	0.00	0.50	0.63
32	0.05	0.57	0.36
33	0.28	0.44	0.37
34	0.02	0.25	0.34
35	0.13	0.20	0.44
36	0.03	0.44	0.38
37	0.48	0.81	0.37
38	0.17	0.21	0.48
39	0.46	0.30	0.45
40	0.27	0.55	0.38
41	0.02	0.56	0.46
42	0.05	0.37	0.55

Table 51. Grade 8 Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	3	1.24	29.00	24.72	23.61	21.43	0.45	0.70
2	3	1.07	29.78	27.07	32.90	9.18	0.40	0.67
3	2	1.86	27.81	46.71	23.63	0.00	0.47	0.65
4	3	1.32	70.65	11.91	16.12	0.00	0.22	0.49
5	2	0.63	49.35	19.67	30.35	0.00	0.40	0.55
6	2	3.21	65.67	23.82	7.30	0.00	0.19	0.61
7	2	1.74	27.49	46.34	24.43	0.00	0.48	0.54
8	2	1.51	49.34	38.93	10.22	0.00	0.30	0.55
9	2	2.26	47.99	36.06	13.69	0.00	0.32	0.62
10	2	2.39	43.74	27.35	26.52	0.00	0.40	0.65
11	2	1.15	46.10	34.06	18.69	0.00	0.36	0.66
12	2	0.86	57.47	16.92	24.75	0.00	0.33	0.47
13	2	1.18	39.12	37.73	21.98	0.00	0.41	0.53
14	2	0.94	36.48	44.75	17.83	0.00	0.40	0.48
15	2	0.25	10.11	24.28	65.36	0.00	0.78	0.50
16	2	0.79	34.00	25.62	39.60	0.00	0.52	0.55
17	3	0.04	30.70	13.98	6.00	49.28	0.49	0.37

Table 52. HS Science Selected-Response Classical Statistics

Item	% Omit	p-value	Item-Total Corr.
1	0.10	0.32	0.26
2	0.20	0.73	0.44
3	0.07	0.41	0.16
4	0.29	0.35	0.26
5	0.35	0.41	0.43
6	0.18	0.45	0.56
7	0.21	0.46	0.30
8	0.22	0.36	0.34
9	0.38	0.51	0.41
10	0.89	0.31	0.52
11	0.37	0.67	0.49
12	0.22	0.51	0.36
13	0.24	0.69	0.54
14	0.42	0.54	0.37
15	0.24	0.30	0.23
16	0.33	0.51	0.51
17	0.42	0.47	0.52
18	0.08	0.65	0.47
19	0.13	0.41	0.39
20	1.24	0.71	0.52
21	0.52	0.39	0.48
22	2.09	0.28	0.52
23	1.09	0.27	0.31
24	0.23	0.31	0.35
25	0.79	0.08	0.26
26	0.39	0.16	0.33
27	0.79	0.14	0.26
28	0.00	0.33	0.59
29	0.08	0.61	0.43
30	0.71	0.42	0.45
31	0.18	0.31	0.35
32	2.53	0.35	0.60
33	0.00	0.39	0.66
34	0.10	0.63	0.44
35	0.10	0.60	0.43
36	0.15	0.52	0.37
37	0.23	0.49	0.39
38	1.18	0.14	0.36
39	0.45	0.44	0.47
40	1.66	0.32	0.54
41	0.00	0.48	0.55
42	0.22	0.66	0.42
43	1.47	0.52	0.33

Table 53. HS Science Constructed-Response Classical Statistics

Item	Max Points	Omit %	%0	%1	%2	%3	p-value	Item-Total Corr.
1	2	5.82	54.77	33.16	6.25	0.00	0.23	0.65
2	2	6.59	58.93	22.12	12.36	0.00	0.23	0.57
3	2	3.75	54.10	32.14	10.01	0.00	0.26	0.54
4	2	5.66	78.62	13.32	2.39	0.00	0.09	0.44
5	2	3.76	43.58	35.77	16.89	0.00	0.35	0.60
6	3	4.85	42.84	31.63	15.99	4.69	0.26	0.65
7	2	3.77	47.96	28.82	19.44	0.00	0.34	0.65
8	2	5.90	69.70	17.83	6.57	0.00	0.15	0.50
9	2	6.82	67.37	22.11	3.70	0.00	0.15	0.51
10	3	5.32	49.12	27.25	10.79	7.51	0.24	0.66
11	2	7.97	46.29	19.37	26.37	0.00	0.36	0.48
12	2	7.86	57.51	29.40	5.23	0.00	0.20	0.59
13	2	6.17	42.43	42.78	8.63	0.00	0.30	0.56
14	2	4.24	27.90	34.60	33.25	0.00	0.51	0.63
15	2	4.69	33.68	39.39	22.25	0.00	0.42	0.67
16	2	3.14	50.69	38.72	7.44	0.00	0.27	0.60
17	3	2.41	49.33	15.83	18.32	14.11	0.32	0.64

Table 54. Correlations Between Content Standards

Grade	Content Standard	2	3	4	Full Test
4	1	0.723	0.728	0.741	0.901
	2		0.714	0.699	0.869
	3			0.724	0.886
	4				0.880
5	1	0.787	0.780	0.856	0.903
	2		0.816	0.895	0.948
	3			0.863	0.927
	4				0.940
7	1	0.786	0.736	0.788	0.920
	2		0.725	0.763	0.905
	3			0.741	0.859
	4				0.909
8	1	0.809	0.832	0.862	0.931
	2		0.820	0.871	0.925
	3			0.876	0.947
	4				0.927
HS SS	1	n/a	n/a	n/a	n/a
	2		n/a	n/a	n/a
	3			n/a	n/a
	4				n/a
HS Sci	1	0.788	0.791	0.805	0.914
	2		0.818	0.879	0.923
	3			0.833	0.940
	4				0.898

Table 55. Number of Items Field Tested

	Grade 4	Grade 7	Grade 5	Grade 8	HS SS	HS Sci
Number of Field Test Forms	6	6	12	12	n/a	12
Number of Items Field Tested	84	102	113	109	n/a	124

Table 56. Data Review Outcomes

	Grade 4	Grade 7	Grade 5	Grade 8	HS Social Studies	HS Science
Number of Items Field Tested	84	102	113	109	n/a	124
Number of Items Flagged and Reviewed	20	44	25	34	n/a	52
Data Review Outcome					n/a	
• Accept	14	43	23	30	n/a	40
• Reject	5	1	2	4	n/a	8
• Revise and Re-Field Test	1	0	0	0	n/a	4