

STATISTICAL SUMMARY

SPRING 2016 ADMINISTRATION OF OHIO’S STATE TESTS IN ENGLISH LANGUAGE ARTS, MATHEMATICS, SCIENCE AND SOCIAL STUDIES

The State Board of Education of Ohio adopted Ohio’s Learning Standards in English language arts and mathematics in 2010 as part of a multi-state effort. Also that year, the State Board adopted new, more rigorous, standards in science and social studies. Ohio’s Learning Standards for English language arts, mathematics, science and social studies describe the educational targets for students in each subject area. The new Ohio’s State Tests (OST) are designed to measure student progress toward achievement of Ohio’s Learning Standards. In spring 2016, the Ohio Department of Education administered, for the first time, Ohio’s State Tests in English language arts (ELA) and mathematics to assess proficiency with respect to Ohio’s Learning Standards. Specifically, the state tests assess student achievement in meeting the English language arts and mathematics standards in grades 3 through 8 and high school coursework, social studies standards in grades 4 and 6, and high school coursework in U.S. History and U.S. Government. In science, students take state tests in grades 5 and 8, and following instruction in physical science and biology in high school.

Ohio’s State Tests are a series of fixed form assessments that were intended for online administration. However, because some schools were not ready to transition to the online testing environment, the assessments were offered in both online and paper formats.

Statistics reported here are based on the results of all high school students participating in the spring 2016 administration and on the results of all public school students participating in the spring 2016 administration in elementary and middle school.

Table 1 – Operational Summary Statistics – English Language Arts and Mathematics

Operational Summary Statistics											
Test	N-count	Max Obtained Raw Score	Raw Score Mean	Raw Score Standard Deviation	Raw Score SEM	Max Obtained Scale Score	Min Obtained Scale Score	Scale Score Mean	Scale Score Standard Deviation	Scale Score SEM	Reliability
English Language Arts											
Grade 3 ELA	128797	38	18.27	6.83	2.46	863	545	699.4	55.08	19.51	0.87
Grade 4 ELA	125645	40	20.84	7.32	2.64	846	549	708.22	46.59	16.84	0.87
Grade 5 ELA	122799	40	21.27	7.28	2.52	848	552	711.52	49.42	17.37	0.88
Grade 6 ELA	125904	48	23.69	9.77	2.93	851	555	706.2	50.66	15.49	0.91
Grade 7 ELA	126925	48	24.34	9.54	3.02	833	568	704.54	42.98	13.52	0.90
Grade 8 ELA	126525	47	23.70	9.16	2.90	805	586	697.55	34.69	11.15	0.90
High School ELA 1	136862	48	23.77	8.81	2.92	800	606	703.66	29.09	9.79	0.89
High School ELA 2	123934	49	24.30	8.73	3.02	808	597	702.82	30.8	10.6	0.88
Mathematics											
Grade 3 Math	129317	51	29.18	10.24	2.90	818	587	719.24	46.82	12.84	0.92
Grade 4 Math	125207	50	25.51	10.86	2.87	835	605	723.16	48.29	12.62	0.93
Grade 5 Math	121931	49	23.89	11.04	2.92	804	624	711.72	36.64	9.83	0.93
Grade 6 Math	124756	53	27.42	12.30	3.01	790	616	706.79	36.63	9.2	0.94
Grade 7 Math	123514	54	26.84	12.25	3.24	806	605	705.28	40.23	10.41	0.93
Grade 8 Math	96206	52	24.86	10.69	3.02	774	633	699.97	26.71	7.51	0.92

High School Algebra	127499	55	23.15	11.62	3.29	814	618	701.9	34.97	9.72	0.92
High School Geometry	107159	54	20.29	9.14	3.03	829	623	700.57	31.39	10.38	0.89
Integrated Math 1	10956	55	21.97	12.30	3.25	813	616	697.78	36.13	9.86	0.93
Integrated Math 2	8779	53	19.16	9.87	3.12	829	610	689.54	35.8	11.19	0.90

Table 2 – Operational Summary Statistics – Science and Social Studies

Operational Summary Statistics											
Test	N-count	Max Obtained Raw Score	Raw Score Mean	Raw Score Standard Deviation	Raw Score SEM	Max Obtained Scale Score	Min Obtained Scale Score	Scale Score Mean	Scale Score Standard Deviation	Scale Score SEM	Reliability
Science											
Grade 5 Science	122666	56	31.80	12.32	3.90	845	559	720.04	47.17	13.47	0.92
Grade 8 Science	127741	56	26.48	11.94	3.38	868	575	718.28	46.49	13.57	0.91
Biology	107582	55	23.57	10.38	3.11	823	617	712.17	28.79	9.51	0.89
Physical Science	3419	47	12.78	6.84	2.05	772	634	688.46	20.03	9.72	0.76
Social Studies											
Grade 4 Social Studies	125535	64	34.98	11.85	3.35	800	621	717.21	24.29	7.56	0.90
Grade 6 Social Studies	125835	64	38.59	13.37	4.01	829	541	711.22	45.15	12.81	0.92
American Government	86717	64	31.71	12.78	4.24	774	642	708.98	18.61	5.47	0.91
American History	122836	63	35.00	13.17	6.45	800	619	717.12	26.15	7.66	0.91

Table 3 – Scale Score Cut Points for Basic, Proficient, Accelerated, and Advanced Performance Levels – ELA and Mathematics

Performance Standard Cut Scores				
Test	Basic	Proficient	Accelerated	Advanced
English Language Arts				
Grade 3 English Language Arts	672	700	725	752
Grade 4 English Language Arts	674	700	725	753
Grade 5 English Language Arts	669	700	725	755
Grade 6 English Language Arts	668	700	725	751
Grade 7 English Language Arts	670	700	725	749
Grade 8 English Language Arts	682	700	725	744
High School English Language Arts 1	683	700	725	739
High School English Language Arts 2	679	700	725	742
Mathematics				
Grade 3 Mathematics	683	700	725	753
Grade 4 Mathematics	686	700	725	759
Grade 5 Mathematics	687	700	725	749
Grade 6 Mathematics	682	700	725	744
Grade 7 Mathematics	684	700	725	755
Grade 8 Mathematics	690	700	725	744
Algebra	682	700	725	754
Geometry	678	700	725	756
Integrated Mathematics 1	682	700	725	754
Integrated Mathematics 2	677	700	725	758

Table 4 – Scale Score Cut Points for Basic, Proficient, Accelerated, and Advanced Performance Levels – Science and Social Studies

Performance Standard Cut Scores				
Test	Basic	Proficient	Accelerated	Advanced
Science				
Grade 5 Science	664	700	725	753
Grade 8 Science	674	700	725	766
Biology ¹	685	700	725	735
Physical Science ²	684	700	725	749
Social Studies				
Grade 4 Social Studies	687	700	725	751
Grade 6 Social Studies	676	700	725	755
American Government	687	700	725	739
American History	684	700	725	738

¹ The Biology test is prescribed for students in the class of 2019 and beyond.

² The Physical Science test is to be used toward graduation only by students in the class of 2018.

Table 5 – Percentage of Students at Each Performance Level – English Language Arts and Mathematics

Percentage of Students at Each Performance Level					
Test	Limited	Basic	Proficient	Accelerated	Advanced
English Language Arts					
Grade 3 ELA	32	14	20	14	21
Grade 4 ELA	22	20	18	18	21
Grade 5 ELA	20	20	19	19	22
Grade 6 ELA	25	21	15	16	23
Grade 7 ELA	21	25	21	16	17
Grade 8 ELA	33	20	24	12	11
High School ELA 1	23	19	32	14	11
High School ELA 2	21	25	28	15	11
Mathematics					
Grade 3 Math	22	11	19	20	28
Grade 4 Math	21	10	18	28	23
Grade 5 Math	23	14	27	18	17
Grade 6 Math	26	18	25	14	18
Grade 7 Math	30	15	23	20	12
Grade 8 Math	32	15	34	14	4
Algebra	32	18	25	17	8
Geometry	23	28	27	17	5
Integrated Math 1	35	19	22	17	7
Integrated Math 2	40	25	19	12	5

Table 6 – Percentage of Students at Each Performance Level – Science and Social Studies

Percentage of Students at Each Performance Level					
Test	Limited	Basic	Proficient	Accelerated	Advanced
Science					
Grade 5 Science	13	20	19	22	26
Grade 8 Science	17	18	18	30	17
Biology	16	19	33	10	23
Physical Science	39	35	22	4	1
Social Studies					
Grade 4 Social Studies	10	14	37	29	10
Grade 6 Social Studies	21	18	22	20	19
American Government	11	22	46	15	6
American History	11	14	34	18	23

Subscale data

Percentage of Students Below Proficient, At Proficient and Above Proficient – English Language Arts

Percentage of Students Below Proficient, At Proficient and Above Proficient				
Test	Strand	Below Proficient	At/Near Proficient	Above Proficient
ELA				
Grade 3 ELA	RI	34	31	35
	RL	38	32	30
	W	17	64	19
Grade 4 ELA	RI	26	41	32
	RL	31	27	42
	W	30	31	38
Grade 5 ELA	RI	28	29	44
	RL	21	42	37
	W	30	44	26
Grade 6 ELA	RI	33	24	43
	RL	33	29	38
	W	35	25	40
Grade 7 ELA	RI	30	34	36
	RL	34	32	34
	W	33	43	23
Grade 8 ELA	RI	35	37	28
	RL	36	30	33
	W	31	25	43
High School ELA 1	RI	30	27	43
	RL	27	42	31
	W	29	21	50

High School ELA 2	RI	29	34	38
	RL	29	37	34
	W	32	43	24

Note: RL = Reading Literary Text; RI = Reading Informational Text; W = Writing

Percentage of Students Below Proficient, At Proficient and Above Proficient – Mathematics

Percentage of Students Below Proficient, At Proficient and Above Proficient				
Test	Strand	Below Proficient	At/Near Proficient	Above Proficient
Mathematics				
Grade 3 Mathematics	MR	26	22	51
	MUD	20	33	47
	NO	18	33	49
	G	18	41	41
	FRA	18	36	47
Grade 4 Mathematics	MR	21	19	60
	MUD	21	24	55
	G	19	35	46
	FRA	19	29	52
Grade 5 Mathematics	MR	26	27	47
	D	24	30	46
	G	27	27	46
	FRA	25	33	43
Grade 6 Mathematics	MR	31	27	42
	EE	31	29	41
	NS	28	31	41
	GS	27	40	33
	RP	27	35	39

Grade 7 Mathematics	MR	28	35	38
	SP	31	38	31
	NS	34	31	35
	G	28	35	36
	RP	34	23	43
Grade 8 Mathematics	MR	37	26	37
	EE	34	31	35
	NS	28	41	31
	G	34	28	39
	F	35	42	23
Algebra	MR	40	22	37
	NQEE	37	26	37
	F	34	32	34
	S	21	47	32
Geometry	MR	34	39	27
	CP	31	34	35
	ST	37	29	34
	C	22	48	30
	P	0	84	16
Integrated Mathematics 1	MR	44	24	33
	A	44	24	32
	NQF	44	27	29
	G	40	31	29
	S	42	26	32
Integrated Mathematics 2	MR	43	35	22
	NQEE	47	29	24
	F	35	42	23
	G	45	28	27
	P	29	54	18

Note: MR = Model Reasoning; MUD = Multiplication & Division; NO = Numbers & Operations; G = Geometry; FRA = Fractions; D = Decimals; EE = Expressions & Equations; NS = The Number System; GS = Geometry and Statistics; RP = Ratios and Proportions; SP = Statistics and Probability; F = Functions; NQEE = Number, Quantities, Equations and Expressions; S = Statistics; CP = Congruence & Proof; ST = Similarity & Trigonometry; C = Circles; P = Probability; A = Algebra; NQF = Number & Quantity/Functions

Percentage of Students Below Proficient, At Proficient and Above Proficient – Science

Percentage of Students Below Proficient, At Proficient and Above Proficient				
Test	Strand	Below Proficient	At/Near Proficient	Above Proficient
Science				
Grade 5 Science	ES	20	35	46
	LS	26	20	54
	PS	23	27	50
Grade 8 Science	ES	24	26	50
	LS	26	28	46
	PS	22	28	51
Biology	BSA	15	38	47
	BSB	23	42	34
	BSC	23	29	48
	BSD	24	36	40
Physical Science	PSA	55	36	9
	PSB	26	60	14
	PSC	51	39	10
	PSD	36	51	13

Note: ES = Earth Science; LS = Life Science; PS = Physical Science; BS-A = Heredity; BS-B = Evolution; BS-C = Diversity and Interdependence of Life; BS-D = Cells; PS-A = Study of Matter; PS-B = Energy & Waves; PS-C = Forces & Motions; PS-D = The Universe

Percentage of Students Below Proficient, At Proficient and Above Proficient – Social Studies

Percentage of Students Below Proficient, At Proficient and Above Proficient				
Test	Strand	Below Proficient	At Proficient	Above Proficient
Social Studies				
Grade 4 Social Studies	EG	12	31	56
	GO	16	27	58
	HI	12	37	51
Grade 6 Social Studies	EC	30	31	40
	GE	26	33	41
	HG	28	24	47
American Government	AGA	17	32	51
	AGB	19	33	48
	AGC	17	43	40
American History	AHA	16	29	55
	AHB	18	18	65
	AHC	17	26	57

Note: EG = Economics & Government; GO = Government; HI = History; EC = Economics; GE = Geography; HG = History and Government; AGA = Historic Documents; AGB = Principles & Structures; AGC = Ohio/Policy/Economy; AHA = Skills & Documents; AHB = 1877-1945; AHC = 1945-Present

Raw score to scale score conversion tables are shown in Tables A1 through A27. Frequency counts are shown in Tables B1 through B27.

**Table A1. Raw Score Conversion Table and Performance Interpretation –
Grade 3 Reading (based on a portion of the Grade 3 English Language
Arts test)**

Raw Score	Scale Score	Promotion Eligibility
0	16	Not Met
1	16	Not Met
2	18	Not Met
3	23	Not Met
4	27	Not Met
5	30	Not Met
6	33	Not Met
7	35	Not Met
8	38	Not Met
9	40	Not Met
10	42	Met
11	44	Met
12	45	Met
13	47	Met
14	49	Met
15	51	Met

Raw Score	Scale Score	Promotion Eligibility
16	52	Met
17	54	Met
18	56	Met
19	58	Met
20	60	Met
21	62	Met
22	64	Met
23	66	Met
24	69	Met
25	72	Met
26	75	Met
27	79	Met
28	84	Met
29	86	Met
30	86	Met

Promotion eligibility is met for school year 2015-2016 at a cut score of 42. Future years may have a different cut score.

**Table A2. Raw Score Conversion Table and Performance Interpretation –
Grade 3 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	545	Limited
1	545	Limited
2	545	Limited
3	551	Limited
4	568	Limited
5	583	Limited
6	595	Limited
7	607	Limited
8	617	Limited
9	627	Limited
10	636	Limited
11	644	Limited
12	652	Limited
13	660	Limited
14	668	Limited
15	676	Basic
16	683	Basic
17	690	Basic
18	700	Proficient
19	705	Proficient

Raw Score	Scale Score	Performance Interpretation
20	712	Proficient
21	719	Proficient
22	727	Accelerated
23	734	Accelerated
24	742	Accelerated
25	752	Advanced
26	758	Advanced
27	767	Advanced
28	776	Advanced
29	785	Advanced
30	795	Advanced
31	806	Advanced
32	817	Advanced
33	830	Advanced
34	845	Advanced
35	862	Advanced
36	863	Advanced
37	863	Advanced
38	863	Advanced

**Table A3. Raw Score Conversion Table and Performance Interpretation –
Grade 4 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	549	Limited
1	549	Limited
2	555	Limited
3	575	Limited
4	590	Limited
5	601	Limited
6	612	Limited
7	621	Limited
8	629	Limited
9	636	Limited
10	643	Limited
11	650	Limited
12	656	Limited
13	662	Limited
14	668	Limited
15	674	Basic
16	679	Basic
17	685	Basic
18	690	Basic
19	696	Basic
20	701	Proficient

Raw Score	Scale Score	Performance Interpretation
21	707	Proficient
22	712	Proficient
23	718	Proficient
24	725	Accelerated
25	730	Accelerated
26	736	Accelerated
27	743	Accelerated
28	753	Advanced
29	757	Advanced
30	765	Advanced
31	773	Advanced
32	783	Advanced
33	793	Advanced
34	805	Advanced
35	818	Advanced
36	834	Advanced
37	846	Advanced
38	846	Advanced
39	846	Advanced
40	846	Advanced

**Table A4. Raw Score Conversion Table and Performance Interpretation –
Grade 5 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	552	Limited
1	552	Limited
2	552	Limited
3	566	Limited
4	581	Limited
5	594	Limited
6	605	Limited
7	614	Limited
8	623	Limited
9	631	Limited
10	638	Limited
11	646	Limited
12	653	Limited
13	659	Limited
14	666	Limited
15	672	Basic
16	678	Basic
17	684	Basic
18	690	Basic
19	696	Basic
20	702	Proficient

Raw Score	Scale Score	Performance Interpretation
21	708	Proficient
22	714	Proficient
23	721	Proficient
24	727	Accelerated
25	733	Accelerated
26	740	Accelerated
27	747	Accelerated
28	755	Advanced
29	761	Advanced
30	769	Advanced
31	778	Advanced
32	786	Advanced
33	796	Advanced
34	807	Advanced
35	818	Advanced
36	832	Advanced
37	848	Advanced
38	848	Advanced
39	848	Advanced
40	848	Advanced

**Table A5. Raw Score Conversion Table and Performance Interpretation –
Grade 6 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	555	Limited
1	555	Limited
2	555	Limited
3	571	Limited
4	586	Limited
5	597	Limited
6	607	Limited
7	616	Limited
8	623	Limited
9	631	Limited
10	637	Limited
11	643	Limited
12	649	Limited
13	655	Limited
14	660	Limited
15	665	Limited
16	670	Basic
17	675	Basic
18	679	Basic
19	684	Basic
20	689	Basic
21	693	Basic
22	698	Basic
23	702	Proficient
24	707	Proficient

Raw Score	Scale Score	Performance Interpretation
25	711	Proficient
26	716	Proficient
27	720	Proficient
28	725	Accelerated
29	730	Accelerated
30	735	Accelerated
31	739	Accelerated
32	745	Accelerated
33	751	Advanced
34	756	Advanced
35	761	Advanced
36	768	Advanced
37	774	Advanced
38	781	Advanced
39	789	Advanced
40	797	Advanced
41	806	Advanced
42	816	Advanced
43	827	Advanced
44	840	Advanced
45	851	Advanced
46	851	Advanced
47	851	Advanced
48	851	Advanced

**Table A6. Raw Score Conversion Table and Performance Interpretation –
Grade 7 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	568	Limited
1	568	Limited
2	568	Limited
3	584	Limited
4	597	Limited
5	607	Limited
6	616	Limited
7	623	Limited
8	630	Limited
9	636	Limited
10	642	Limited
11	647	Limited
12	652	Limited
13	657	Limited
14	662	Limited
15	666	Limited
16	670	Basic
17	675	Basic
18	679	Basic
19	683	Basic
20	687	Basic
21	691	Basic
22	694	Basic
23	698	Basic
24	702	Proficient

Raw Score	Scale Score	Performance Interpretation
25	706	Proficient
26	710	Proficient
27	714	Proficient
28	718	Proficient
29	722	Proficient
30	726	Accelerated
31	731	Accelerated
32	735	Accelerated
33	740	Accelerated
34	744	Accelerated
35	749	Advanced
36	755	Advanced
37	760	Advanced
38	766	Advanced
39	772	Advanced
40	779	Advanced
41	786	Advanced
42	794	Advanced
43	803	Advanced
44	814	Advanced
45	827	Advanced
46	833	Advanced
47	833	Advanced
48	833	Advanced

**Table A7. Raw Score Conversion Table and Performance Interpretation –
Grade 8 English Language Arts**

Raw Score	Scale Score	Performance Interpretation
0	586	Limited
1	586	Limited
2	586	Limited
3	599	Limited
4	609	Limited
5	618	Limited
6	625	Limited
7	631	Limited
8	637	Limited
9	642	Limited
10	647	Limited
11	651	Limited
12	655	Limited
13	659	Limited
14	663	Limited
15	667	Limited
16	671	Limited
17	674	Limited
18	678	Limited
19	682	Basic
20	685	Basic
21	688	Basic
22	691	Basic
23	695	Basic
24	698	Basic

Raw Score	Scale Score	Performance Interpretation
25	701	Proficient
26	705	Proficient
27	708	Proficient
28	711	Proficient
29	715	Proficient
30	718	Proficient
31	722	Proficient
32	726	Accelerated
33	730	Accelerated
34	734	Accelerated
35	738	Accelerated
36	744	Advanced
37	747	Advanced
38	753	Advanced
39	758	Advanced
40	764	Advanced
41	771	Advanced
42	779	Advanced
43	787	Advanced
44	798	Advanced
45	805	Advanced
46	805	Advanced
47	805	Advanced
48	805	Advanced

**Table A8. Raw Score Conversion Table and Performance Interpretation –
High School English Language Arts I**

Raw Score	Scale Score	Performance Interpretation
0	606	Limited
1	606	Limited
2	606	Limited
3	619	Limited
4	628	Limited
5	635	Limited
6	641	Limited
7	646	Limited
8	651	Limited
9	656	Limited
10	660	Limited
11	663	Limited
12	667	Limited
13	671	Limited
14	674	Limited
15	677	Limited
16	680	Limited
17	683	Basic
18	686	Basic
19	689	Basic
20	692	Basic
21	695	Basic
22	698	Basic
23	701	Proficient
24	704	Proficient

Raw Score	Scale Score	Performance Interpretation
25	707	Proficient
26	710	Proficient
27	713	Proficient
28	716	Proficient
29	719	Proficient
30	722	Proficient
31	725	Accelerated
32	729	Accelerated
33	732	Accelerated
34	736	Accelerated
35	740	Advanced
36	744	Advanced
37	748	Advanced
38	753	Advanced
39	757	Advanced
40	763	Advanced
41	769	Advanced
42	776	Advanced
43	784	Advanced
44	793	Advanced
45	800	Advanced
46	800	Advanced
47	800	Advanced
48	800	Advanced

**Table A9. Raw Score Conversion Table and Performance Interpretation –
High School English Language Arts II**

Raw Score	Scale Score	Performance Interpretation
0	597	Limited
1	597	Limited
2	597	Limited
3	607	Limited
4	617	Limited
5	625	Limited
6	632	Limited
7	638	Limited
8	643	Limited
9	648	Limited
10	653	Limited
11	657	Limited
12	661	Limited
13	665	Limited
14	669	Limited
15	672	Limited
16	676	Limited
17	679	Basic
18	683	Basic
19	686	Basic
20	689	Basic
21	692	Basic
22	695	Basic
23	698	Basic
24	702	Proficient
25	705	Proficient

Raw Score	Scale Score	Performance Interpretation
26	708	Proficient
27	711	Proficient
28	714	Proficient
29	717	Proficient
30	721	Proficient
31	725	Accelerated
32	727	Accelerated
33	731	Accelerated
34	735	Accelerated
35	739	Accelerated
36	743	Advanced
37	747	Advanced
38	751	Advanced
39	756	Advanced
40	761	Advanced
41	767	Advanced
42	773	Advanced
43	780	Advanced
44	788	Advanced
45	798	Advanced
46	808	Advanced
47	808	Advanced
48	808	Advanced
49	808	Advanced

**Table A10. Raw Score Conversion Table and Performance Interpretation –
Grade 3 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	587	Limited
1	587	Limited
2	587	Limited
3	587	Limited
4	588	Limited
5	598	Limited
6	607	Limited
7	614	Limited
8	621	Limited
9	627	Limited
10	633	Limited
11	639	Limited
12	644	Limited
13	649	Limited
14	654	Limited
15	658	Limited
16	663	Limited
17	667	Limited
18	672	Limited
19	676	Limited
20	680	Limited
21	684	Basic
22	688	Basic
23	692	Basic
24	696	Basic
25	700	Proficient
26	704	Proficient
27	708	Proficient
28	712	Proficient
29	716	Proficient
30	720	Proficient
31	725	Accelerated
32	728	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	733	Accelerated
34	737	Accelerated
35	741	Accelerated
36	746	Accelerated
37	753	Advanced
38	756	Advanced
39	761	Advanced
40	766	Advanced
41	772	Advanced
42	778	Advanced
43	784	Advanced
44	792	Advanced
45	799	Advanced
46	808	Advanced
47	818	Advanced
48	818	Advanced
49	818	Advanced
50	818	Advanced
51	818	Advanced

**Table A11. Raw Score Conversion Table and Performance Interpretation –
Grade 4 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	605	Limited
1	605	Limited
2	605	Limited
3	605	Limited
4	614	Limited
5	624	Limited
6	633	Limited
7	640	Limited
8	646	Limited
9	652	Limited
10	658	Limited
11	663	Limited
12	668	Limited
13	673	Limited
14	677	Limited
15	681	Limited
16	686	Basic
17	690	Basic
18	694	Basic
19	697	Basic
20	701	Proficient
21	705	Proficient
22	709	Proficient
23	713	Proficient
24	717	Proficient
25	720	Proficient
26	725	Accelerated
27	728	Accelerated
28	732	Accelerated
29	736	Accelerated
30	740	Accelerated
31	744	Accelerated
32	748	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	753	Accelerated
34	757	Accelerated
35	761	Advanced
36	766	Advanced
37	771	Advanced
38	776	Advanced
39	781	Advanced
40	786	Advanced
41	792	Advanced
42	798	Advanced
43	805	Advanced
44	812	Advanced
45	820	Advanced
46	829	Advanced
47	835	Advanced
48	835	Advanced
49	835	Advanced
50	835	Advanced

**Table A12. Raw Score Conversion Table and Performance Interpretation –
Grade 5 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	624	Limited
1	624	Limited
2	624	Limited
3	626	Limited
4	635	Limited
5	643	Limited
6	649	Limited
7	655	Limited
8	660	Limited
9	664	Limited
10	668	Limited
11	672	Limited
12	676	Limited
13	680	Limited
14	683	Limited
15	687	Basic
16	689	Basic
17	692	Basic
18	695	Basic
19	698	Basic
20	701	Proficient
21	704	Proficient
22	707	Proficient
23	709	Proficient
24	712	Proficient
25	715	Proficient
26	718	Proficient
27	720	Proficient
28	723	Proficient
29	726	Accelerated
30	729	Accelerated
31	732	Accelerated
32	735	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	738	Accelerated
34	741	Accelerated
35	744	Accelerated
36	749	Advanced
37	751	Advanced
38	755	Advanced
39	759	Advanced
40	763	Advanced
41	767	Advanced
42	772	Advanced
43	778	Advanced
44	784	Advanced
45	791	Advanced
46	800	Advanced
47	804	Advanced
48	804	Advanced
49	804	Advanced

**Table A13. Raw Score Conversion Table and Performance Interpretation –
Grade 6 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	616	Limited
1	616	Limited
2	616	Limited
3	616	Limited
4	622	Limited
5	630	Limited
6	636	Limited
7	642	Limited
8	647	Limited
9	651	Limited
10	656	Limited
11	659	Limited
12	663	Limited
13	667	Limited
14	670	Limited
15	673	Limited
16	676	Limited
17	679	Limited
18	682	Basic
19	685	Basic
20	688	Basic
21	691	Basic
22	693	Basic
23	696	Basic
24	698	Basic
25	701	Proficient
26	703	Proficient
27	706	Proficient
28	708	Proficient
29	711	Proficient
30	713	Proficient
31	716	Proficient
32	718	Proficient

Raw Score	Scale Score	Performance Interpretation
33	721	Proficient
34	723	Proficient
35	726	Accelerated
36	728	Accelerated
37	731	Accelerated
38	734	Accelerated
39	737	Accelerated
40	740	Accelerated
41	744	Advanced
42	746	Advanced
43	750	Advanced
44	754	Advanced
45	758	Advanced
46	762	Advanced
47	767	Advanced
48	773	Advanced
49	780	Advanced
50	788	Advanced
51	790	Advanced
52	790	Advanced
53	790	Advanced

**Table A14. Raw Score Conversion Table and Performance Interpretation –
Grade 7 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	605	Limited
1	605	Limited
2	605	Limited
3	606	Limited
4	616	Limited
5	624	Limited
6	631	Limited
7	637	Limited
8	642	Limited
9	647	Limited
10	652	Limited
11	656	Limited
12	660	Limited
13	663	Limited
14	667	Limited
15	670	Limited
16	674	Limited
17	677	Limited
18	680	Limited
19	684	Basic
20	686	Basic
21	689	Basic
22	691	Basic
23	694	Basic
24	697	Basic
25	700	Proficient
26	702	Proficient
27	705	Proficient
28	708	Proficient
29	710	Proficient
30	713	Proficient
31	716	Proficient
32	719	Proficient

Raw Score	Scale Score	Performance Interpretation
33	722	Proficient
34	725	Accelerated
35	727	Accelerated
36	730	Accelerated
37	734	Accelerated
38	737	Accelerated
39	740	Accelerated
40	744	Accelerated
41	747	Accelerated
42	751	Accelerated
43	755	Advanced
44	759	Advanced
45	764	Advanced
46	769	Advanced
47	775	Advanced
48	781	Advanced
49	788	Advanced
50	796	Advanced
51	806	Advanced
52	806	Advanced
53	806	Advanced
54	806	Advanced

**Table A15. Raw Score Conversion Table and Performance Interpretation –
Grade 8 Mathematics**

Raw Score	Scale Score	Performance Interpretation
0	633	Limited
1	633	Limited
2	633	Limited
3	633	Limited
4	639	Limited
5	644	Limited
6	649	Limited
7	653	Limited
8	657	Limited
9	661	Limited
10	664	Limited
11	667	Limited
12	670	Limited
13	673	Limited
14	675	Limited
15	678	Limited
16	680	Limited
17	683	Limited
18	685	Limited
19	687	Limited
20	690	Basic
21	692	Basic
22	694	Basic
23	696	Basic
24	699	Basic
25	701	Proficient
26	703	Proficient
27	705	Proficient
28	707	Proficient
29	710	Proficient
30	712	Proficient
31	714	Proficient
32	716	Proficient

Raw Score	Scale Score	Performance Interpretation
33	719	Proficient
34	721	Proficient
35	723	Proficient
36	726	Accelerated
37	728	Accelerated
38	731	Accelerated
39	733	Accelerated
40	736	Accelerated
41	739	Accelerated
42	742	Accelerated
43	746	Advanced
44	749	Advanced
45	753	Advanced
46	757	Advanced
47	762	Advanced
48	768	Advanced
49	774	Advanced
50	774	Advanced
51	774	Advanced
52	774	Advanced

**Table A16. Raw Score Conversion Table and Performance Interpretation –
High School Algebra**

Raw Score	Scale Score	Performance Interpretation
0	618	Limited
1	618	Limited
2	618	Limited
3	622	Limited
4	631	Limited
5	638	Limited
6	645	Limited
7	650	Limited
8	655	Limited
9	659	Limited
10	663	Limited
11	667	Limited
12	671	Limited
13	674	Limited
14	677	Limited
15	680	Limited
16	683	Basic
17	686	Basic
18	689	Basic
19	692	Basic
20	695	Basic
21	697	Basic
22	700	Proficient
23	702	Proficient
24	705	Proficient
25	708	Proficient
26	710	Proficient
27	713	Proficient
28	715	Proficient
29	718	Proficient
30	720	Proficient
31	723	Proficient
32	726	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	728	Accelerated
34	731	Accelerated
35	734	Accelerated
36	737	Accelerated
37	739	Accelerated
38	742	Accelerated
39	745	Accelerated
40	749	Accelerated
41	752	Accelerated
42	755	Advanced
43	759	Advanced
44	763	Advanced
45	767	Advanced
46	771	Advanced
47	776	Advanced
48	781	Advanced
49	787	Advanced
50	794	Advanced
51	802	Advanced
52	813	Advanced
53	814	Advanced
54	814	Advanced
55	814	Advanced

**Table A17. Raw Score Conversion Table and Performance Interpretation –
High School Geometry**

Raw Score	Scale Score	Performance Interpretation
0	623	Limited
1	623	Limited
2	623	Limited
3	623	Limited
4	632	Limited
5	639	Limited
6	646	Limited
7	652	Limited
8	657	Limited
9	662	Limited
10	666	Limited
11	670	Limited
12	674	Limited
13	678	Basic
14	681	Basic
15	685	Basic
16	688	Basic
17	691	Basic
18	695	Basic
19	698	Basic
20	701	Proficient
21	704	Proficient
22	707	Proficient
23	710	Proficient
24	713	Proficient
25	716	Proficient
26	719	Proficient
27	722	Proficient
28	725	Accelerated
29	728	Accelerated
30	731	Accelerated
31	735	Accelerated
32	738	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	741	Accelerated
34	745	Accelerated
35	748	Accelerated
36	752	Accelerated
37	756	Advanced
38	759	Advanced
39	764	Advanced
40	768	Advanced
41	772	Advanced
42	777	Advanced
43	782	Advanced
44	788	Advanced
45	793	Advanced
46	800	Advanced
47	806	Advanced
48	814	Advanced
49	822	Advanced
50	829	Advanced
51	829	Advanced
52	829	Advanced
53	829	Advanced
54	829	Advanced

**Table A18. Raw Score Conversion Table and Performance Interpretation –
High School Integrated Mathematics I**

Raw Score	Scale Score	Performance Interpretation
0	616	Limited
1	616	Limited
2	616	Limited
3	624	Limited
4	633	Limited
5	640	Limited
6	646	Limited
7	651	Limited
8	656	Limited
9	661	Limited
10	665	Limited
11	668	Limited
12	672	Limited
13	675	Limited
14	678	Limited
15	682	Basic
16	684	Basic
17	687	Basic
18	690	Basic
19	692	Basic
20	695	Basic
21	697	Basic
22	700	Proficient
23	702	Proficient
24	705	Proficient
25	707	Proficient
26	710	Proficient
27	712	Proficient
28	715	Proficient
29	717	Proficient
30	719	Proficient
31	722	Proficient
32	725	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	727	Accelerated
34	729	Accelerated
35	732	Accelerated
36	735	Accelerated
37	737	Accelerated
38	740	Accelerated
39	743	Accelerated
40	746	Accelerated
41	749	Accelerated
42	752	Accelerated
43	756	Advanced
44	759	Advanced
45	763	Advanced
46	767	Advanced
47	772	Advanced
48	777	Advanced
49	783	Advanced
50	789	Advanced
51	797	Advanced
52	806	Advanced
53	813	Advanced
54	813	Advanced
55	813	Advanced

**Table A19. Raw Score Conversion Table and Performance Interpretation –
High School Integrated Mathematics II**

Raw Score	Scale Score	Performance Interpretation
0	610	Limited
1	610	Limited
2	610	Limited
3	610	Limited
4	621	Limited
5	629	Limited
6	636	Limited
7	642	Limited
8	648	Limited
9	653	Limited
10	657	Limited
11	662	Limited
12	666	Limited
13	670	Limited
14	674	Limited
15	677	Basic
16	681	Basic
17	684	Basic
18	688	Basic
19	691	Basic
20	694	Basic
21	698	Basic
22	701	Proficient
23	704	Proficient
24	707	Proficient
25	710	Proficient
26	713	Proficient
27	716	Proficient
28	720	Proficient
29	723	Proficient
30	726	Accelerated
31	729	Accelerated
32	733	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	736	Accelerated
34	740	Accelerated
35	743	Accelerated
36	747	Accelerated
37	751	Accelerated
38	755	Accelerated
39	759	Advanced
40	763	Advanced
41	767	Advanced
42	772	Advanced
43	777	Advanced
44	782	Advanced
45	788	Advanced
46	794	Advanced
47	800	Advanced
48	808	Advanced
49	817	Advanced
50	827	Advanced
51	829	Advanced
52	829	Advanced
53	829	Advanced
54	829	Advanced

**Table A20. Raw Score Conversion Table and Performance Interpretation –
Grade 4 Social Studies (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	621	Limited
1	621	Limited
2	621	Limited
3	629	Limited
4	637	Limited
5	643	Limited
6	649	Limited
7	653	Limited
8	657	Limited
9	661	Limited
10	664	Limited
11	667	Limited
12	670	Limited
13	673	Limited
14	676	Limited
15	678	Limited
16	680	Limited
17	683	Limited
18	685	Limited
19	687	Basic
20	689	Basic
21	691	Basic
22	693	Basic
23	695	Basic
24	697	Basic
25	698	Basic
26	700	Proficient
27	702	Proficient
28	704	Proficient
29	706	Proficient
30	707	Proficient
31	709	Proficient
32	711	Proficient

Raw Score	Scale Score	Performance Interpretation
33	713	Proficient
34	714	Proficient
35	716	Proficient
36	718	Proficient
37	720	Proficient
38	722	Proficient
39	723	Proficient
40	725	Accelerated
41	727	Accelerated
42	729	Accelerated
43	731	Accelerated
44	733	Accelerated
45	735	Accelerated
46	738	Accelerated
47	740	Accelerated
48	742	Accelerated
49	745	Accelerated
50	747	Accelerated
51	751	Advanced
52	753	Advanced
53	756	Advanced
54	760	Advanced
55	763	Advanced
56	767	Advanced
57	772	Advanced
58	777	Advanced
59	782	Advanced
60	789	Advanced
61	797	Advanced
62	800	Advanced
63	800	Advanced
64	800	Advanced

**Table A21. Raw Score Conversion Table and Performance Interpretation –
Grade 6 Social Studies (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	541	Limited
1	541	Limited
2	543	Limited
3	560	Limited
4	572	Limited
5	582	Limited
6	590	Limited
7	598	Limited
8	604	Limited
9	610	Limited
10	615	Limited
11	620	Limited
12	625	Limited
13	629	Limited
14	633	Limited
15	637	Limited
16	641	Limited
17	644	Limited
18	648	Limited
19	651	Limited
20	654	Limited
21	657	Limited
22	660	Limited
23	663	Limited
24	666	Limited
25	669	Limited
26	672	Limited
27	676	Basic
28	678	Basic
29	681	Basic
30	683	Basic
31	686	Basic
32	689	Basic

Raw Score	Scale Score	Performance Interpretation
33	691	Basic
34	694	Basic
35	697	Basic
36	700	Proficient
37	703	Proficient
38	705	Proficient
39	708	Proficient
40	711	Proficient
41	714	Proficient
42	717	Proficient
43	720	Proficient
44	723	Proficient
45	727	Accelerated
46	730	Accelerated
47	734	Accelerated
48	737	Accelerated
49	741	Accelerated
50	745	Accelerated
51	749	Accelerated
52	755	Advanced
53	758	Advanced
54	763	Advanced
55	769	Advanced
56	775	Advanced
57	781	Advanced
58	789	Advanced
59	797	Advanced
60	807	Advanced
61	820	Advanced
62	829	Advanced
63	829	Advanced
64	829	Advanced

**Table A22. Raw Score Conversion Table and Performance Interpretation –
High School American Government (administered online)**

Raw Score	Scale Score	Performance Interpretation	Raw Score	Scale Score	Performance Interpretation
0	642	Limited	33	710	Proficient
1	642	Limited	34	712	Proficient
2	643	Limited	35	713	Proficient
3	651	Limited	36	714	Proficient
4	657	Limited	37	715	Proficient
5	661	Limited	38	717	Proficient
6	665	Limited	39	718	Proficient
7	668	Limited	40	719	Proficient
8	671	Limited	41	721	Proficient
9	674	Limited	42	722	Proficient
10	676	Limited	43	724	Proficient
11	678	Limited	44	725	Accelerated
12	680	Limited	45	727	Accelerated
13	682	Limited	46	728	Accelerated
14	684	Limited	47	730	Accelerated
15	686	Limited	48	731	Accelerated
16	687	Basic	49	733	Accelerated
17	689	Basic	50	735	Accelerated
18	690	Basic	51	737	Accelerated
19	692	Basic	52	739	Advanced
20	693	Basic	53	741	Advanced
21	695	Basic	54	743	Advanced
22	696	Basic	55	745	Advanced
23	698	Basic	56	748	Advanced
24	699	Basic	57	751	Advanced
25	700	Proficient	58	754	Advanced
26	701	Proficient	59	758	Advanced
27	703	Proficient	60	763	Advanced
28	704	Proficient	61	769	Advanced
29	705	Proficient	62	774	Advanced
30	707	Proficient	63	774	Advanced
31	708	Proficient	64	774	Advanced
32	709	Proficient			

**Table A23. Raw Score Conversion Table and Performance Interpretation –
High School American History (administered online)**

Raw Score	Scale Score	Performance Interpretation	Raw Score	Scale Score	Performance Interpretation
0	619	Limited	33	713	Proficient
1	619	Limited	34	715	Proficient
2	619	Limited	35	716	Proficient
3	630	Limited	36	718	Proficient
4	638	Limited	37	720	Proficient
5	644	Limited	38	721	Proficient
6	650	Limited	39	723	Proficient
7	654	Limited	40	725	Accelerated
8	658	Limited	41	727	Accelerated
9	662	Limited	42	728	Accelerated
10	665	Limited	43	730	Accelerated
11	669	Limited	44	732	Accelerated
12	672	Limited	45	734	Accelerated
13	674	Limited	46	736	Accelerated
14	677	Limited	47	738	Advanced
15	679	Limited	48	740	Advanced
16	682	Limited	49	742	Advanced
17	684	Basic	50	745	Advanced
18	686	Basic	51	747	Advanced
19	688	Basic	52	750	Advanced
20	690	Basic	53	753	Advanced
21	692	Basic	54	756	Advanced
22	694	Basic	55	760	Advanced
23	696	Basic	56	764	Advanced
24	698	Basic	57	768	Advanced
25	700	Proficient	58	773	Advanced
26	702	Proficient	59	779	Advanced
27	703	Proficient	60	786	Advanced
28	705	Proficient	61	795	Advanced
29	707	Proficient	62	800	Advanced
30	708	Proficient	63	800	Advanced
31	710	Proficient	64	800	Advanced
32	712	Proficient			

**Table A24. Raw Score Conversion Table and Performance Interpretation –
Grade 5 Science (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	559	Limited
1	559	Limited
2	562	Limited
3	580	Limited
4	593	Limited
5	603	Limited
6	611	Limited
7	619	Limited
8	626	Limited
9	632	Limited
10	637	Limited
11	643	Limited
12	647	Limited
13	652	Limited
14	656	Limited
15	661	Limited
16	665	Basic
17	669	Basic
18	672	Basic
19	676	Basic
20	680	Basic
21	683	Basic
22	686	Basic
23	690	Basic
24	693	Basic
25	696	Basic
26	700	Proficient
27	703	Proficient
28	706	Proficient
29	709	Proficient
30	712	Proficient
31	715	Proficient
32	719	Proficient

Raw Score	Scale Score	Performance Interpretation
33	722	Proficient
34	725	Accelerated
35	728	Accelerated
36	731	Accelerated
37	735	Accelerated
38	738	Accelerated
39	742	Accelerated
40	745	Accelerated
41	749	Accelerated
42	753	Advanced
43	757	Advanced
44	761	Advanced
45	766	Advanced
46	771	Advanced
47	776	Advanced
48	782	Advanced
49	789	Advanced
50	796	Advanced
51	804	Advanced
52	814	Advanced
53	827	Advanced
54	845	Advanced
55	845	Advanced
56	845	Advanced

**Table A25. Raw Score Conversion Table and Performance Interpretation –
Grade 8 Science (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	575	Limited
1	575	Limited
2	575	Limited
3	592	Limited
4	605	Limited
5	616	Limited
6	626	Limited
7	634	Limited
8	641	Limited
9	647	Limited
10	653	Limited
11	659	Limited
12	664	Limited
13	669	Limited
14	674	Basic
15	678	Basic
16	682	Basic
17	687	Basic
18	691	Basic
19	694	Basic
20	698	Basic
21	702	Proficient
22	706	Proficient
23	709	Proficient
24	712	Proficient
25	716	Proficient
26	719	Proficient
27	722	Proficient
28	726	Accelerated
29	729	Accelerated
30	732	Accelerated
31	735	Accelerated
32	738	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	742	Accelerated
34	745	Accelerated
35	748	Accelerated
36	751	Accelerated
37	755	Accelerated
38	758	Accelerated
39	762	Accelerated
40	766	Advanced
41	769	Advanced
42	773	Advanced
43	778	Advanced
44	782	Advanced
45	787	Advanced
46	792	Advanced
47	797	Advanced
48	803	Advanced
49	810	Advanced
50	817	Advanced
51	826	Advanced
52	836	Advanced
53	849	Advanced
54	867	Advanced
55	868	Advanced
56	868	Advanced

**Table A26. Raw Score Conversion Table and Performance Interpretation –
High School Biology (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	617	Limited
1	617	Limited
2	619	Limited
3	632	Limited
4	641	Limited
5	649	Limited
6	655	Limited
7	660	Limited
8	665	Limited
9	670	Limited
10	674	Limited
11	677	Limited
12	681	Limited
13	685	Basic
14	687	Basic
15	691	Basic
16	693	Basic
17	696	Basic
18	700	Proficient
19	702	Proficient
20	704	Proficient
21	707	Proficient
22	710	Proficient
23	712	Proficient
24	715	Proficient
25	717	Proficient
26	720	Proficient
27	722	Proficient
28	725	Accelerated
29	727	Accelerated

Raw Score	Scale Score	Performance Interpretation
30	730	Accelerated
31	732	Accelerated
32	735	Advanced
33	737	Advanced
34	740	Advanced
35	742	Advanced
36	745	Advanced
37	747	Advanced
38	750	Advanced
39	753	Advanced
40	756	Advanced
41	759	Advanced
42	762	Advanced
43	765	Advanced
44	768	Advanced
45	772	Advanced
46	776	Advanced
47	780	Advanced
48	784	Advanced
49	789	Advanced
50	794	Advanced
51	801	Advanced
52	808	Advanced
53	818	Advanced
54	823	Advanced
55	823	Advanced
56	823	Advanced

**Table A27. Raw Score Conversion Table and Performance Interpretation –
High School Physical Science (administered online)**

Raw Score	Scale Score	Performance Interpretation
0	634	Limited
1	634	Limited
2	635	Limited
3	646	Limited
4	654	Limited
5	661	Limited
6	667	Limited
7	671	Limited
8	676	Limited
9	680	Limited
10	684	Basic
11	687	Basic
12	690	Basic
13	693	Basic
14	696	Basic
15	698	Basic
16	701	Proficient
17	703	Proficient
18	706	Proficient
19	708	Proficient
20	710	Proficient
21	712	Proficient
22	714	Proficient
23	717	Proficient
24	719	Proficient
25	721	Proficient
26	723	Proficient
27	725	Accelerated
28	727	Accelerated
29	729	Accelerated
30	731	Accelerated
31	733	Accelerated
32	735	Accelerated

Raw Score	Scale Score	Performance Interpretation
33	737	Accelerated
34	739	Accelerated
35	741	Accelerated
36	743	Accelerated
37	745	Accelerated
38	747	Accelerated
39	749	Advanced
40	752	Advanced
41	754	Advanced
42	757	Advanced
43	759	Advanced
44	762	Advanced
45	765	Advanced
46	768	Advanced
47	772	Advanced
48	776	Advanced
49	780	Advanced
50	785	Advanced
51	790	Advanced
52	797	Advanced
53	805	Advanced
54	815	Advanced
55	815	Advanced
56	815	Advanced

Table B1. Scale Score Frequency Distributions – Grade 3 Reading (based on a portion of the Grade 3 English Language Arts test)

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
16	162	0.13	162	0.13
18	456	0.35	618	0.48
23	1105	0.86	1723	1.34
27	1985	1.54	3708	2.88
30	3234	2.51	6942	5.39
33	4398	3.41	11340	8.80
35	5273	4.09	16613	12.90
38	5938	4.61	22551	17.51
40	6431	4.99	28982	22.50
42	6589	5.12	35571	27.62
44	6800	5.28	42371	32.89
45	7033	5.46	49404	38.35
47	7215	5.60	56619	43.96
49	7061	5.48	63680	49.44
51	7033	5.46	70713	54.90
52	7138	5.54	77851	60.44
54	6898	5.36	84749	65.79
56	6868	5.33	91617	71.13
58	6515	5.06	98132	76.18
60	6281	4.88	104413	81.06
62	5851	4.54	110264	85.60
64	5160	4.01	115424	89.61
66	4372	3.39	119796	93.00
69	3372	2.62	123168	95.62
72	2452	1.90	125620	97.52
75	1642	1.27	127262	98.80
79	953	0.74	128215	99.54
84	426	0.33	128641	99.87
86	169	0.13	128810	100.00

Table B2. Scale Score Frequency Distributions – Grade 3 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
545	229	0.18	229	0.18
551	421	0.33	650	0.50
568	750	0.58	1400	1.09
583	1346	1.04	2746	2.13
595	2014	1.56	4760	3.70
607	2602	2.02	7362	5.72
617	3255	2.53	10617	8.24
627	3881	3.01	14498	11.26
636	4420	3.43	18918	14.69
644	4943	3.84	23861	18.52
652	5411	4.20	29272	22.72
660	5576	4.33	34848	27.05
668	5860	4.55	40708	31.60
676	6106	4.74	46814	36.34
683	6334	4.92	53148	41.26
690	6205	4.82	59353	46.08
700	6361	4.94	65714	51.02
705	6409	4.98	72123	55.99
712	6293	4.89	78416	60.88
719	6169	4.79	84585	65.67
727	6044	4.69	90629	70.36
734	5935	4.61	96564	74.97
742	5674	4.40	102238	79.37
752	5202	4.04	107440	83.41
758	4855	3.77	112295	87.18
767	4203	3.26	116498	90.44
776	3573	2.77	120071	93.22
785	2846	2.21	122917	95.43
795	2134	1.66	125051	97.08
806	1501	1.17	126552	98.25
817	1048	0.81	127600	99.06
830	630	0.49	128230	99.55
845	331	0.26	128561	99.81
862	177	0.14	128738	99.94
863	72	0.06	128810	100.00

Table B3. Scale Score Frequency Distributions – Grade 4 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
549	17	0.01	17	0.01
555	38	0.03	55	0.04
575	121	0.10	176	0.14
590	313	0.25	489	0.39
601	604	0.48	1093	0.87
612	1075	0.86	2168	1.73
621	1618	1.29	3786	3.01
629	2133	1.70	5919	4.71
636	2673	2.13	8592	6.84
643	3170	2.52	11762	9.36
650	3677	2.93	15439	12.29
656	3925	3.12	19364	15.41
662	4246	3.38	23610	18.79
668	4555	3.63	28165	22.41
674	4706	3.75	32871	26.16
679	4895	3.90	37766	30.06
685	5083	4.05	42849	34.10
690	5284	4.21	48133	38.31
696	5506	4.38	53639	42.69
701	5639	4.49	59278	47.18
707	5667	4.51	64945	51.69
712	5773	4.59	70718	56.28
718	5744	4.57	76462	60.85
725	5848	4.65	82310	65.50
730	5779	4.60	88089	70.10
736	5686	4.53	93775	74.63
743	5334	4.24	99109	78.87
753	5259	4.19	104368	83.06
757	4656	3.71	109024	86.76
765	4305	3.43	113329	90.19
773	3773	3.00	117102	93.19
783	2971	2.36	120073	95.56
793	2303	1.83	122376	97.39
805	1528	1.22	123904	98.61
818	924	0.74	124828	99.34

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
834	493	0.39	125321	99.73
846	334	0.27	125655	100.00

Table B4. Scale Score Frequency Distributions – Grade 5 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
552	107	0.09	107	0.09
566	201	0.16	308	0.25
581	456	0.37	764	0.62
594	706	0.57	1470	1.20
605	1017	0.83	2487	2.03
614	1434	1.17	3921	3.19
623	1737	1.41	5658	4.61
631	2208	1.80	7866	6.41
638	2503	2.04	10369	8.44
646	2911	2.37	13280	10.81
653	3273	2.67	16553	13.48
659	3600	2.93	20153	16.41
666	4077	3.32	24230	19.73
672	4361	3.55	28591	23.28
678	4719	3.84	33310	27.12
684	4859	3.96	38169	31.08
690	5399	4.40	43568	35.48
696	5550	4.52	49118	40.00
702	5505	4.48	54623	44.48
708	5575	4.54	60198	49.02
714	5957	4.85	66155	53.87
721	5964	4.86	72119	58.73
727	5985	4.87	78104	63.60
733	6069	4.94	84173	68.54
740	5783	4.71	89956	73.25
747	5498	4.48	95454	77.73
755	5380	4.38	100834	82.11
761	4793	3.90	105627	86.01
769	4330	3.53	109957	89.54
778	3650	2.97	113607	92.51
786	3076	2.50	116683	95.02
796	2356	1.92	119039	96.93
807	1680	1.37	120719	98.30
818	1090	0.89	121809	99.19
832	550	0.45	122359	99.64

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
848	444	0.36	122803	100.00

Table B5. Scale Score Frequency Distributions – Grade 6 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
555	94	0.07	94	0.07
571	156	0.12	250	0.20
586	343	0.27	593	0.47
597	672	0.53	1265	1.00
607	1146	0.91	2411	1.91
616	1686	1.34	4097	3.25
623	2252	1.79	6349	5.04
631	2926	2.32	9275	7.37
637	3286	2.61	12561	9.98
643	3558	2.83	16119	12.80
649	3828	3.04	19947	15.84
655	3931	3.12	23878	18.96
660	3933	3.12	27811	22.09
665	3986	3.17	31797	25.25
670	3773	3.00	35570	28.25
675	3771	2.99	39341	31.24
679	3782	3.00	43123	34.25
684	3704	2.94	46827	37.19
689	3704	2.94	50531	40.13
693	3676	2.92	54207	43.05
698	3825	3.04	58032	46.09
702	3733	2.96	61765	49.05
707	3918	3.11	65683	52.17
711	3712	2.95	69395	55.11
716	3894	3.09	73289	58.21
720	3869	3.07	77158	61.28
725	4009	3.18	81167	64.46
730	4079	3.24	85246	67.70
735	4085	3.24	89331	70.95
739	4153	3.30	93484	74.24
745	3982	3.16	97466	77.41
751	3913	3.11	101379	80.52
756	3735	2.97	105114	83.48
761	3659	2.91	108773	86.39
768	3554	2.82	112327	89.21

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
774	3218	2.56	115545	91.77
781	2828	2.25	118373	94.01
789	2346	1.86	120719	95.87
797	1876	1.49	122595	97.36
806	1370	1.09	123965	98.45
816	884	0.70	124849	99.15
827	559	0.44	125408	99.60
840	301	0.24	125709	99.84
851	204	0.16	125913	100.00

Table B6. Scale Score Frequency Distributions – Grade 7 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
568	107	0.08	107	0.08
584	140	0.11	247	0.19
597	273	0.22	520	0.41
607	588	0.46	1108	0.87
616	965	0.76	2073	1.63
623	1420	1.12	3493	2.75
630	1880	1.48	5373	4.23
636	2369	1.87	7742	6.10
642	2661	2.10	10403	8.20
647	3030	2.39	13433	10.58
652	3133	2.47	16566	13.05
657	3326	2.62	19892	15.67
662	3490	2.75	23382	18.42
666	3626	2.86	27008	21.28
670	3642	2.87	30650	24.15
675	3730	2.94	34380	27.08
679	3894	3.07	38274	30.15
683	4009	3.16	42283	33.31
687	4090	3.22	46373	36.53
691	4254	3.35	50627	39.88
694	4287	3.38	54914	43.26
698	4270	3.36	59184	46.62
702	4244	3.34	63428	49.97
706	4448	3.50	67876	53.47
710	4484	3.53	72360	57.00
714	4390	3.46	76750	60.46
718	4470	3.52	81220	63.98
722	4410	3.47	85630	67.46
726	4190	3.30	89820	70.76
731	4136	3.26	93956	74.02
735	3969	3.13	97925	77.14
740	3923	3.09	101848	80.24
744	3709	2.92	105557	83.16
749	3469	2.73	109026	85.89
755	3304	2.60	112330	88.49

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
760	2971	2.34	115301	90.83
766	2659	2.09	117960	92.93
772	2306	1.82	120266	94.74
779	1979	1.56	122245	96.30
786	1667	1.31	123912	97.62
794	1214	0.96	125126	98.57
803	800	0.63	125926	99.20
814	552	0.43	126478	99.64
827	283	0.22	126761	99.86
833	176	0.14	126937	100.00

Table B7. Scale Score Frequency Distributions – Grade 8 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
586	68	0.05	68	0.05
599	103	0.08	171	0.14
609	230	0.18	401	0.32
618	432	0.34	833	0.66
625	812	0.64	1645	1.30
631	1218	0.96	2863	2.26
637	1783	1.41	4646	3.67
642	2269	1.79	6915	5.47
647	2610	2.06	9525	7.53
651	3232	2.55	12757	10.08
655	3584	2.83	16341	12.91
659	3906	3.09	20247	16.00
663	4029	3.18	24276	19.19
667	4054	3.20	28330	22.39
671	4194	3.31	32524	25.70
674	4325	3.42	36849	29.12
678	4294	3.39	41143	32.52
682	4210	3.33	45353	35.84
685	4161	3.29	49514	39.13
688	4385	3.47	53899	42.60
691	4377	3.46	58276	46.06
695	4303	3.40	62579	49.46
698	4378	3.46	66957	52.92
701	4381	3.46	71338	56.38
705	4411	3.49	75749	59.87
708	4368	3.45	80117	63.32
711	4306	3.40	84423	66.72
715	4197	3.32	88620	70.04
718	4205	3.32	92825	73.36
722	4133	3.27	96958	76.63
726	4000	3.16	100958	79.79
730	3941	3.11	104899	82.90
734	3593	2.84	108492	85.74
738	3512	2.78	112004	88.52
744	3090	2.44	115094	90.96

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
747	2794	2.21	117888	93.17
753	2429	1.92	120317	95.09
758	1974	1.56	122291	96.65
764	1534	1.21	123825	97.86
771	1049	0.83	124874	98.69
779	798	0.63	125672	99.32
787	453	0.36	126125	99.68
798	240	0.19	126365	99.87
805	167	0.13	126532	100.00

Table B8. Scale Score Frequency Distributions – High School 1 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
606	173	0.13	173	0.13
619	211	0.15	384	0.28
628	371	0.27	755	0.55
635	670	0.49	1425	1.04
641	1045	0.76	2470	1.80
646	1563	1.14	4033	2.95
651	2091	1.53	6124	4.47
656	2483	1.81	8607	6.29
660	2761	2.02	11368	8.31
663	3120	2.28	14488	10.59
667	3354	2.45	17842	13.04
671	3407	2.49	21249	15.53
674	3468	2.53	24717	18.06
677	3572	2.61	28289	20.67
680	3697	2.70	31986	23.37
683	3973	2.90	35959	26.27
686	4032	2.95	39991	29.22
689	4209	3.08	44200	32.29
692	4396	3.21	48596	35.51
695	4703	3.44	53299	38.94
698	4768	3.48	58067	42.43
701	5069	3.70	63136	46.13
704	5280	3.86	68416	49.99
707	5453	3.98	73869	53.97
710	5751	4.20	79620	58.17
713	5822	4.25	85442	62.43
716	5787	4.23	91229	66.66
719	5674	4.15	96903	70.80
722	5556	4.06	102459	74.86
725	5159	3.77	107618	78.63
729	5053	3.69	112671	82.32
732	4485	3.28	117156	85.60
736	4230	3.09	121386	88.69
740	3578	2.61	124964	91.30
744	3034	2.22	127998	93.52

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
748	2568	1.88	130566	95.40
753	2003	1.46	132569	96.86
757	1481	1.08	134050	97.94
763	1144	0.84	135194	98.78
769	717	0.52	135911	99.30
776	485	0.35	136396	99.66
784	243	0.18	136639	99.83
793	137	0.10	136776	99.93
800	90	0.07	136866	100.00

Table B9. Scale Score Frequency Distributions – High School 2 ELA

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
597	53	0.04	53	0.04
607	105	0.08	158	0.13
617	206	0.17	364	0.29
625	355	0.29	719	0.58
632	640	0.52	1359	1.10
638	889	0.72	2248	1.81
643	1279	1.03	3527	2.85
648	1795	1.45	5322	4.29
653	2111	1.70	7433	6.00
657	2483	2.00	9916	8.00
661	2745	2.21	12661	10.22
665	3160	2.55	15821	12.77
669	3299	2.66	19120	15.43
672	3359	2.71	22479	18.14
676	3737	3.02	26216	21.15
679	3835	3.09	30051	24.25
683	4126	3.33	34177	27.58
686	4218	3.40	38395	30.98
689	4541	3.66	42936	34.64
692	4596	3.71	47532	38.35
695	4770	3.85	52302	42.20
698	4940	3.99	57242	46.19
702	4985	4.02	62227	50.21
705	5028	4.06	67255	54.27
708	5010	4.04	72265	58.31
711	4918	3.97	77183	62.28
714	4901	3.95	82084	66.23
717	4805	3.88	86889	70.11
721	4532	3.66	91421	73.76
725	4393	3.54	95814	77.31
727	4174	3.37	99988	80.68
731	3828	3.09	103816	83.76
735	3490	2.82	107306	86.58
739	3236	2.61	110542	89.19
743	2784	2.25	113326	91.44

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
747	2494	2.01	115820	93.45
751	2094	1.69	117914	95.14
756	1656	1.34	119570	96.48
761	1419	1.14	120989	97.62
767	1072	0.86	122061	98.49
773	746	0.60	122807	99.09
780	521	0.42	123328	99.51
788	305	0.25	123633	99.75
798	159	0.13	123792	99.88
808	146	0.12	123938	100.00

Table B10. Scale Score Frequency Distributions – Grade 3 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
587	131	0.10	131	0.10
588	151	0.12	282	0.22
598	271	0.21	553	0.43
607	414	0.32	967	0.75
614	623	0.48	1590	1.23
621	784	0.61	2374	1.84
627	965	0.75	3339	2.58
633	1170	0.90	4509	3.49
639	1412	1.09	5921	4.58
644	1751	1.35	7672	5.93
649	1915	1.48	9587	7.41
654	2091	1.62	11678	9.03
658	2375	1.84	14053	10.87
663	2621	2.03	16674	12.89
667	2762	2.14	19436	15.03
672	3094	2.39	22530	17.42
676	3210	2.48	25740	19.90
680	3251	2.51	28991	22.42
684	3384	2.62	32375	25.03
688	3744	2.89	36119	27.93
692	3802	2.94	39921	30.87
696	3921	3.03	43842	33.90
700	3890	3.01	47732	36.91
704	3911	3.02	51643	39.93
708	4138	3.20	55781	43.13
712	4049	3.13	59830	46.26
716	4150	3.21	63980	49.47
720	4207	3.25	68187	52.72
725	4280	3.31	72467	56.03
728	4192	3.24	76659	59.27
733	4181	3.23	80840	62.51
737	4150	3.21	84990	65.72
741	4352	3.37	89342	69.08
746	4248	3.28	93590	72.37
753	4174	3.23	97764	75.59

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
756	4066	3.14	101830	78.74
761	4033	3.12	105863	81.86
766	3799	2.94	109662	84.79
772	3426	2.65	113088	87.44
778	3288	2.54	116376	89.99
784	2810	2.17	119186	92.16
792	2588	2.00	121774	94.16
799	2261	1.75	124035	95.91
808	1873	1.45	125908	97.36
818	3420	2.64	129328	100.00

Table B11. Scale Score Frequency Distributions – Grade 4 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
605	1552	1.24	1552	1.24
614	1056	0.84	2608	2.08
624	1363	1.09	3971	3.17
633	1470	1.17	5441	4.35
640	1652	1.32	7093	5.66
646	1889	1.51	8982	7.17
652	2016	1.61	10998	8.78
658	2050	1.64	13048	10.42
663	2182	1.74	15230	12.16
668	2452	1.96	17682	14.12
673	2601	2.08	20283	16.20
677	2669	2.13	22952	18.33
681	2810	2.24	25762	20.57
686	2923	2.33	28685	22.91
690	3109	2.48	31794	25.39
694	3291	2.63	35085	28.02
697	3267	2.61	38352	30.63
701	3429	2.74	41781	33.37
705	3556	2.84	45337	36.21
709	3742	2.99	49079	39.20
713	3857	3.08	52936	42.28
717	3888	3.11	56824	45.38
720	3995	3.19	60819	48.57
725	3968	3.17	64787	51.74
728	4023	3.21	68810	54.95
732	4096	3.27	72906	58.23
736	3927	3.14	76833	61.36
740	4011	3.20	80844	64.56
744	3867	3.09	84711	67.65
748	3967	3.17	88678	70.82
753	3729	2.98	92407	73.80
757	3735	2.98	96142	76.78
761	3418	2.73	99560	79.51
766	3348	2.67	102908	82.19
771	3099	2.47	106007	84.66

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
776	2984	2.38	108991	87.04
781	2875	2.30	111866	89.34
786	2533	2.02	114399	91.36
792	2351	1.88	116750	93.24
798	2036	1.63	118786	94.87
805	1757	1.40	120543	96.27
812	1416	1.13	121959	97.40
820	1133	0.90	123092	98.31
829	869	0.69	123961	99.00
835	1253	1.00	125214	100.00

Table B12. Scale Score Frequency Distributions – Grade 5 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
624	724	0.59	724	0.59
626	836	0.69	1560	1.28
635	1171	0.96	2731	2.24
643	1537	1.26	4268	3.50
649	1827	1.50	6095	5.00
655	2108	1.73	8203	6.73
660	2340	1.92	10543	8.65
664	2626	2.15	13169	10.80
668	2725	2.23	15894	13.03
672	2980	2.44	18874	15.48
676	3063	2.51	21937	17.99
680	3148	2.58	25085	20.57
683	3273	2.68	28358	23.26
687	3395	2.78	31753	26.04
689	3516	2.88	35269	28.92
692	3548	2.91	38817	31.83
695	3577	2.93	42394	34.77
698	3551	2.91	45945	37.68
701	3615	2.96	49560	40.64
704	3661	3.00	53221	43.65
707	3639	2.98	56860	46.63
709	3676	3.01	60536	49.65
712	3672	3.01	64208	52.66
715	3570	2.93	67778	55.59
718	3499	2.87	71277	58.45
720	3598	2.95	74875	61.41
723	3505	2.87	78380	64.28
726	3452	2.83	81832	67.11
729	3412	2.80	85244	69.91
732	3400	2.79	88644	72.70
735	3306	2.71	91950	75.41
738	3109	2.55	95059	77.96
741	2990	2.45	98049	80.41
744	2845	2.33	100894	82.74
749	2601	2.13	103495	84.88

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
751	2521	2.07	106016	86.94
755	2336	1.92	108352	88.86
759	2185	1.79	110537	90.65
763	2020	1.66	112557	92.31
767	1768	1.45	114325	93.76
772	1662	1.36	115987	95.12
778	1444	1.18	117431	96.31
784	1340	1.10	118771	97.41
791	1089	0.89	119860	98.30
800	843	0.69	120703	98.99
804	1232	1.01	121935	100.00

Table B13. Scale Score Frequency Distributions – Grade 6 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
616	378	0.30	378	0.30
622	520	0.42	898	0.72
630	864	0.69	1762	1.41
636	1215	0.97	2977	2.39
642	1661	1.33	4638	3.72
647	1900	1.52	6538	5.24
651	2245	1.80	8783	7.04
656	2535	2.03	11318	9.07
659	2730	2.19	14048	11.26
663	2812	2.25	16860	13.51
667	2891	2.32	19751	15.83
670	2994	2.40	22745	18.23
673	3025	2.42	25770	20.66
676	3120	2.50	28890	23.16
679	3135	2.51	32025	25.67
682	3107	2.49	35132	28.16
685	3155	2.53	38287	30.69
688	3172	2.54	41459	33.23
691	3217	2.58	44676	35.81
693	3090	2.48	47766	38.29
696	3171	2.54	50937	40.83
698	3175	2.54	54112	43.37
701	3233	2.59	57345	45.96
703	3202	2.57	60547	48.53
706	3102	2.49	63649	51.02
708	3123	2.50	66772	53.52
711	3030	2.43	69802	55.95
713	3059	2.45	72861	58.40
716	3091	2.48	75952	60.88
718	3086	2.47	79038	63.35
721	3024	2.42	82062	65.78
723	3043	2.44	85105	68.21
726	2923	2.34	88028	70.56
728	2927	2.35	90955	72.90
731	2777	2.23	93732	75.13

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
734	2819	2.26	96551	77.39
737	2798	2.24	99349	79.63
740	2774	2.22	102123	81.86
744	2629	2.11	104752	83.96
746	2651	2.12	107403	86.09
750	2498	2.00	109901	88.09
754	2348	1.88	112249	89.97
758	2296	1.84	114545	91.81
762	2163	1.73	116708	93.55
767	1962	1.57	118670	95.12
773	1747	1.40	120417	96.52
780	1516	1.22	121933	97.73
788	1156	0.93	123089	98.66
790	1671	1.34	124760	100.00

Table B14. Scale Score Frequency Distributions – Grade 7 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
605	105	0.09	105	0.09
606	241	0.20	346	0.28
616	483	0.39	829	0.67
624	873	0.71	1702	1.38
631	1419	1.15	3121	2.53
637	1874	1.52	4995	4.04
642	2140	1.73	7135	5.78
647	2622	2.12	9757	7.90
652	2781	2.25	12538	10.15
656	2848	2.31	15386	12.46
660	2875	2.33	18261	14.78
663	2960	2.40	21221	17.18
667	2999	2.43	24220	19.61
670	3033	2.46	27253	22.06
674	3029	2.45	30282	24.52
677	3054	2.47	33336	26.99
680	3187	2.58	36523	29.57
684	3152	2.55	39675	32.12
686	3102	2.51	42777	34.63
689	3129	2.53	45906	37.16
691	3177	2.57	49083	39.74
694	3092	2.50	52175	42.24
697	3083	2.50	55258	44.73
700	3132	2.54	58390	47.27
702	3266	2.64	61656	49.91
705	3240	2.62	64896	52.54
708	3250	2.63	68146	55.17
710	3199	2.59	71345	57.76
713	3036	2.46	74381	60.22
716	3086	2.50	77467	62.71
719	3114	2.52	80581	65.24
722	3078	2.49	83659	67.73
725	3044	2.46	86703	70.19
727	2899	2.35	89602	72.54
730	2900	2.35	92502	74.89

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
734	2855	2.31	95357	77.20
737	2824	2.29	98181	79.48
740	2664	2.16	100845	81.64
744	2561	2.07	103406	83.71
747	2456	1.99	105862	85.70
751	2312	1.87	108174	87.57
755	2222	1.80	110396	89.37
759	2066	1.67	112462	91.05
764	1997	1.62	114459	92.66
769	1769	1.43	116228	94.09
775	1593	1.29	117821	95.38
781	1433	1.16	119254	96.54
788	1228	0.99	120482	97.54
796	1084	0.88	121566	98.42
806	1957	1.58	123523	100.00

Table B15. Scale Score Frequency Distributions – Grade 8 Mathematics

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
633	704	0.73	704	0.73
639	759	0.79	1463	1.52
644	1109	1.15	2572	2.67
649	1405	1.46	3977	4.13
653	1564	1.63	5541	5.76
657	1775	1.84	7316	7.60
661	1856	1.93	9172	9.53
664	1786	1.86	10958	11.39
667	1884	1.96	12842	13.35
670	1872	1.95	14714	15.29
673	2087	2.17	16801	17.46
675	2107	2.19	18908	19.65
678	2363	2.46	21271	22.11
680	2315	2.41	23586	24.51
683	2463	2.56	26049	27.07
685	2503	2.60	28552	29.68
687	2559	2.66	31111	32.34
690	2741	2.85	33852	35.18
692	2906	3.02	36758	38.21
694	2820	2.93	39578	41.14
696	3115	3.24	42693	44.37
699	3095	3.22	45788	47.59
701	3169	3.29	48957	50.88
703	3171	3.30	52128	54.18
705	3166	3.29	55294	57.47
707	3172	3.30	58466	60.77
710	3114	3.24	61580	64.00
712	3154	3.28	64734	67.28
714	3060	3.18	67794	70.46
716	3010	3.13	70804	73.59
719	2849	2.96	73653	76.55
721	2686	2.79	76339	79.34
723	2619	2.72	78958	82.07
726	2516	2.62	81474	84.68
728	2308	2.40	83782	87.08

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
731	1965	2.04	85747	89.12
733	1827	1.90	87574	91.02
736	1723	1.79	89297	92.81
739	1441	1.50	90738	94.31
742	1301	1.35	92039	95.66
746	1088	1.13	93127	96.79
749	862	0.90	93989	97.69
753	741	0.77	94730	98.46
757	518	0.54	95248	99.00
762	369	0.38	95617	99.38
768	272	0.28	95889	99.66
774	323	0.34	96212	100.00

**Table B16. Scale Score Frequency Distributions –
High School Algebra**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
618	134	0.11	134	0.11
622	264	0.21	398	0.31
631	544	0.43	942	0.74
638	1065	0.84	2007	1.57
645	1820	1.43	3827	3.00
650	2599	2.04	6426	5.04
655	3437	2.70	9863	7.73
659	3987	3.13	13850	10.86
663	4597	3.61	18447	14.47
667	4572	3.59	23019	18.05
671	4673	3.66	27692	21.72
674	4565	3.58	32257	25.30
677	4452	3.49	36709	28.79
680	4200	3.29	40909	32.08
683	4186	3.28	45095	35.37
686	3912	3.07	49007	38.43
689	3812	2.99	52819	41.42
692	3685	2.89	56504	44.31
695	3647	2.86	60151	47.17
697	3567	2.80	63718	49.97
700	3572	2.80	67290	52.77
702	3438	2.70	70728	55.47
705	3439	2.70	74167	58.16
708	3318	2.60	77485	60.77
710	3241	2.54	80726	63.31
713	3165	2.48	83891	65.79
715	3034	2.38	86925	68.17
718	2993	2.35	89918	70.52
720	2864	2.25	92782	72.76
723	2703	2.12	95485	74.88
726	2656	2.08	98141	76.97
728	2621	2.06	100762	79.02
731	2517	1.97	103279	81.00
734	2259	1.77	105538	82.77

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
737	2217	1.74	107755	84.51
739	2094	1.64	109849	86.15
742	1900	1.49	111749	87.64
745	1870	1.47	113619	89.10
749	1823	1.43	115442	90.53
752	1620	1.27	117062	91.80
755	1444	1.13	118506	92.94
759	1371	1.08	119877	94.01
763	1281	1.00	121158	95.02
767	1137	0.89	122295	95.91
771	1052	0.83	123347	96.73
776	887	0.70	124234	97.43
781	812	0.64	125046	98.07
787	631	0.49	125677	98.56
794	584	0.46	126261	99.02
802	439	0.34	126700	99.36
813	354	0.28	127054	99.64
814	458	0.36	127512	100.00

**Table B17. Scale Score Frequency Distributions –
High School Geometry**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
623	336	0.31	336	0.31
632	562	0.52	898	0.84
639	1002	0.94	1900	1.77
646	1761	1.64	3661	3.42
652	2412	2.25	6073	5.67
657	2878	2.69	8951	8.35
662	3392	3.17	12343	11.52
666	3719	3.47	16062	14.99
670	3945	3.68	20007	18.67
674	4190	3.91	24197	22.58
678	4214	3.93	28411	26.51
681	4360	4.07	32771	30.58
685	4361	4.07	37132	34.65
688	4482	4.18	41614	38.83
691	4407	4.11	46021	42.94
695	4196	3.92	50217	46.86
698	4345	4.05	54562	50.91
701	4183	3.90	58745	54.82
704	3917	3.66	62662	58.47
707	3907	3.65	66569	62.12
710	3639	3.40	70208	65.52
713	3574	3.34	73782	68.85
716	3352	3.13	77134	71.98
719	3254	3.04	80388	75.01
722	2923	2.73	83311	77.74
725	2811	2.62	86122	80.37
728	2672	2.49	88794	82.86
731	2412	2.25	91206	85.11
735	2237	2.09	93443	87.20
738	1989	1.86	95432	89.05
741	1759	1.64	97191	90.69
745	1664	1.55	98855	92.25
748	1416	1.32	100271	93.57
752	1271	1.19	101542	94.75

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
756	1101	1.03	102643	95.78
759	912	0.85	103555	96.63
764	709	0.66	104264	97.29
768	672	0.63	104936	97.92
772	493	0.46	105429	98.38
777	399	0.37	105828	98.75
782	309	0.29	106137	99.04
788	214	0.20	106351	99.24
793	236	0.22	106587	99.46
800	186	0.17	106773	99.64
806	135	0.13	106908	99.76
814	87	0.08	106995	99.84
822	60	0.06	107055	99.90
829	108	0.10	107163	100.00

**Table B18. Scale Score Frequency Distributions –
High School Integrated Mathematics 1**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
616	40	0.37	40	0.37
624	52	0.47	92	0.84
633	124	1.13	216	1.97
640	196	1.79	412	3.76
646	261	2.38	673	6.14
651	372	3.40	1045	9.54
656	420	3.83	1465	13.37
661	435	3.97	1900	17.34
665	464	4.24	2364	21.58
668	426	3.89	2790	25.47
672	393	3.59	3183	29.05
675	365	3.33	3548	32.38
678	328	2.99	3876	35.38
682	347	3.17	4223	38.55
684	298	2.72	4521	41.27
687	322	2.94	4843	44.20
690	283	2.58	5126	46.79
692	284	2.59	5410	49.38
695	261	2.38	5671	51.76
697	253	2.31	5924	54.07
700	262	2.39	6186	56.46
702	268	2.45	6454	58.91
705	233	2.13	6687	61.04
707	250	2.28	6937	63.32
710	237	2.16	7174	65.48
712	241	2.20	7415	67.68
715	236	2.15	7651	69.83
717	221	2.02	7872	71.85
719	216	1.97	8088	73.82
722	218	1.99	8306	75.81
725	212	1.94	8518	77.75
727	181	1.65	8699	79.40
729	181	1.65	8880	81.05
732	177	1.62	9057	82.67

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
735	183	1.67	9240	84.34
737	187	1.71	9427	86.04
740	154	1.41	9581	87.45
743	159	1.45	9740	88.90
746	129	1.18	9869	90.08
749	158	1.44	10027	91.52
752	142	1.30	10169	92.82
756	132	1.20	10301	94.02
759	108	0.99	10409	95.01
763	114	1.04	10523	96.05
767	91	0.83	10614	96.88
772	72	0.66	10686	97.54
777	59	0.54	10745	98.07
783	59	0.54	10804	98.61
789	42	0.38	10846	99.00
797	40	0.37	10886	99.36
806	24	0.22	10910	99.58
813	46	0.42	10956	100.00

**Table B19. Scale Score Frequency Distributions –
High School Integrated Mathematics 2**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
610	55	0.63	55	0.63
621	60	0.68	115	1.31
629	123	1.40	238	2.71
636	164	1.87	402	4.58
642	289	3.29	691	7.87
648	339	3.86	1030	11.73
653	407	4.64	1437	16.37
657	437	4.98	1874	21.35
662	417	4.75	2291	26.10
666	441	5.02	2732	31.12
670	396	4.51	3128	35.63
674	360	4.10	3488	39.73
677	358	4.08	3846	43.81
681	345	3.93	4191	47.74
684	339	3.86	4530	51.60
688	293	3.34	4823	54.94
691	280	3.19	5103	58.13
694	290	3.30	5393	61.43
698	255	2.90	5648	64.34
701	220	2.51	5868	66.84
704	242	2.76	6110	69.60
707	217	2.47	6327	72.07
710	222	2.53	6549	74.60
713	202	2.30	6751	76.90
716	184	2.10	6935	79.00
720	167	1.90	7102	80.90
723	178	2.03	7280	82.93
726	166	1.89	7446	84.82
729	140	1.59	7586	86.41
733	132	1.50	7718	87.91
736	130	1.48	7848	89.40
740	130	1.48	7978	90.88
743	100	1.14	8078	92.02
747	114	1.30	8192	93.31

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
751	89	1.01	8281	94.33
755	83	0.95	8364	95.27
759	86	0.98	8450	96.25
763	56	0.64	8506	96.89
767	74	0.84	8580	97.73
772	49	0.56	8629	98.29
777	39	0.44	8668	98.74
782	25	0.28	8693	99.02
788	23	0.26	8716	99.28
794	20	0.23	8736	99.51
800	25	0.28	8761	99.79
808	7	0.08	8768	99.87
817	4	0.05	8772	99.92
827	2	0.02	8774	99.94
829	5	0.06	8779	100.00

Table B20. Scale Score Frequency Distributions – Grade 5 Science

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
559	18	0.01	18	0.01
561	6	0.00	24	0.02
562	21	0.02	45	0.04
579	16	0.01	61	0.05
580	47	0.04	108	0.09
592	24	0.02	132	0.11
593	106	0.09	238	0.19
602	53	0.04	291	0.24
603	236	0.19	527	0.43
611	457	0.37	984	0.80
619	696	0.57	1680	1.37
625	211	0.17	1891	1.54
626	823	0.67	2714	2.21
632	1194	0.97	3908	3.19
637	1549	1.26	5457	4.45
642	383	0.31	5840	4.76
643	1290	1.05	7130	5.81
647	1903	1.55	9033	7.36
652	2009	1.64	11042	9.00
656	2075	1.69	13117	10.69
660	468	0.38	13585	11.07
661	1768	1.44	15353	12.52
665	2272	1.85	17625	14.37
668	489	0.40	18114	14.77
669	1843	1.50	19957	16.27
672	2253	1.84	22210	18.11
676	2397	1.95	24607	20.06
679	510	0.42	25117	20.48
680	1993	1.62	27110	22.10
683	2401	1.96	29511	24.06
686	2527	2.06	32038	26.12
690	2499	2.04	34537	28.15
693	2567	2.09	37104	30.25
696	2695	2.20	39799	32.44
700	2736	2.23	42535	34.67

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
703	2763	2.25	45298	36.93
706	2784	2.27	48082	39.20
709	2972	2.42	51054	41.62
712	2892	2.36	53946	43.98
715	2419	1.97	56365	45.95
716	531	0.43	56896	46.38
719	3067	2.50	59963	48.88
722	3098	2.53	63061	51.41
725	3196	2.61	66257	54.01
728	3331	2.72	69588	56.73
731	2785	2.27	72373	59.00
732	520	0.42	72893	59.42
735	3396	2.77	76289	62.19
738	2967	2.42	79256	64.61
739	589	0.48	79845	65.09
742	3512	2.86	83357	67.95
745	2969	2.42	86326	70.37
746	568	0.46	86894	70.84
749	2969	2.42	89863	73.26
750	572	0.47	90435	73.72
753	2927	2.39	93362	76.11
754	561	0.46	93923	76.57
757	2976	2.43	96899	78.99
758	537	0.44	97436	79.43
761	2839	2.31	100275	81.75
762	500	0.41	100775	82.15
766	2857	2.33	103632	84.48
767	476	0.39	104108	84.87
771	2609	2.13	106717	87.00
772	478	0.39	107195	87.39
776	2560	2.09	109755	89.47
777	449	0.37	110204	89.84
782	2350	1.92	112554	91.75
783	407	0.33	112961	92.09
789	2123	1.73	115084	93.82
790	356	0.29	115440	94.11

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
796	1784	1.45	117224	95.56
797	302	0.25	117526	95.81
804	1518	1.24	119044	97.05
806	250	0.20	119294	97.25
814	1163	0.95	120457	98.20
816	180	0.15	120637	98.34
827	883	0.72	121520	99.06
829	128	0.10	121648	99.17
845	1020	0.83	122668	100.00

Table B21. Scale Score Frequency Distributions – Grade 8 Science

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
575	178	0.14	178	0.14
592	209	0.16	387	0.30
593	31	0.02	418	0.33
605	399	0.31	817	0.64
606	42	0.03	859	0.67
616	741	0.58	1600	1.25
617	96	0.08	1696	1.33
626	1284	1.01	2980	2.33
634	1807	1.41	4787	3.75
641	2262	1.77	7049	5.52
647	2608	2.04	9657	7.56
653	2899	2.27	12556	9.83
659	3042	2.38	15598	12.21
664	3185	2.49	18783	14.70
668	636	0.50	19419	15.20
669	2591	2.03	22010	17.23
674	3269	2.56	25279	19.79
677	641	0.50	25920	20.29
678	2585	2.02	28505	22.31
682	3198	2.50	31703	24.82
686	615	0.48	32318	25.30
687	2678	2.10	34996	27.39
690	627	0.49	35623	27.89
691	2719	2.13	38342	30.01
694	3265	2.56	41607	32.57
697	615	0.48	42222	33.05
698	2719	2.13	44941	35.18
701	614	0.48	45555	35.66
702	2731	2.14	48286	37.80
705	571	0.45	48857	38.25
706	2733	2.14	51590	40.38
708	607	0.48	52197	40.86
709	2751	2.15	54948	43.01
712	3225	2.52	58173	45.54
715	535	0.42	58708	45.96

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
716	2804	2.19	61512	48.15
718	548	0.43	62060	48.58
719	2777	2.17	64837	50.75
722	3339	2.61	68176	53.37
725	546	0.43	68722	53.80
726	2757	2.16	71479	55.95
728	511	0.40	71990	56.35
729	2744	2.15	74734	58.50
731	489	0.38	75223	58.88
732	2891	2.26	78114	61.15
735	3431	2.69	81545	63.83
738	3360	2.63	84905	66.46
741	468	0.37	85373	66.83
742	2760	2.16	88133	68.99
745	3259	2.55	91392	71.54
748	3111	2.44	94503	73.98
751	3091	2.42	97594	76.40
755	2945	2.31	100539	78.70
758	2878	2.25	103417	80.96
762	2850	2.23	106267	83.19
766	2818	2.21	109085	85.39
769	2303	1.80	111388	87.19
770	291	0.23	111679	87.42
773	2094	1.64	113773	89.06
774	265	0.21	114038	89.27
778	2200	1.72	116238	90.99
782	1777	1.39	118015	92.38
783	205	0.16	118220	92.54
787	1921	1.50	120141	94.05
792	1695	1.33	121836	95.37
797	1380	1.08	123216	96.45
798	139	0.11	123355	96.56
803	1111	0.87	124466	97.43
804	115	0.09	124581	97.52
810	1008	0.79	125589	98.31
817	728	0.57	126317	98.88

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
818	64	0.05	126381	98.93
826	572	0.45	126953	99.38
836	331	0.26	127284	99.64
837	38	0.03	127322	99.67
849	212	0.17	127534	99.83
850	22	0.02	127556	99.85
867	109	0.09	127665	99.94
868	81	0.06	127746	100.00

Table B22. Scale Score Frequency Distributions – High School Biology

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
617	45	0.04	45	0.04
619	72	0.07	117	0.11
620	13	0.01	130	0.12
632	122	0.11	252	0.23
641	222	0.21	474	0.44
649	396	0.37	870	0.81
655	663	0.62	1533	1.42
660	1101	1.02	2634	2.45
665	1626	1.51	4260	3.96
669	224	0.21	4484	4.17
670	1969	1.83	6453	6.00
673	385	0.36	6838	6.36
674	2410	2.24	9248	8.60
676	495	0.46	9743	9.06
677	2672	2.48	12415	11.54
680	553	0.51	12968	12.05
681	3052	2.84	16020	14.89
683	659	0.61	16679	15.50
685	3241	3.01	19920	18.52
686	726	0.67	20646	19.19
687	3279	3.05	23925	22.24
689	710	0.66	24635	22.90
691	3387	3.15	28022	26.05
692	771	0.72	28793	26.76
693	3338	3.10	32131	29.87
695	667	0.62	32798	30.49
696	3290	3.06	36088	33.54
697	679	0.63	36767	34.18
700	3812	3.54	40579	37.72
702	3758	3.49	44337	41.21
704	3181	2.96	47518	44.17
705	566	0.53	48084	44.69
707	3599	3.35	51683	48.04
710	3473	3.23	55156	51.27
712	3348	3.11	58504	54.38

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
714	473	0.44	58977	54.82
715	2871	2.67	61848	57.49
717	3274	3.04	65122	60.53
719	454	0.42	65576	60.95
720	2740	2.55	68316	63.50
721	422	0.39	68738	63.89
722	2594	2.41	71332	66.30
724	414	0.38	71746	66.69
725	2503	2.33	74249	69.01
726	434	0.40	74683	69.42
727	2416	2.25	77099	71.66
728	341	0.32	77440	71.98
730	2358	2.19	79798	74.17
731	357	0.33	80155	74.50
732	2260	2.10	82415	76.61
733	373	0.35	82788	76.95
735	2213	2.06	85001	79.01
736	345	0.32	85346	79.33
737	1928	1.79	87274	81.12
738	314	0.29	87588	81.41
740	1875	1.74	89463	83.16
741	343	0.32	89806	83.48
742	1758	1.63	91564	85.11
743	298	0.28	91862	85.39
745	1757	1.63	93619	87.02
746	278	0.26	93897	87.28
747	1573	1.46	95470	88.74
749	273	0.25	95743	88.99
750	1402	1.30	97145	90.30
751	265	0.25	97410	90.54
753	1317	1.22	98727	91.77
754	234	0.22	98961	91.98
756	1185	1.10	100146	93.09
757	260	0.24	100406	93.33
759	1031	0.96	101437	94.29
760	182	0.17	101619	94.46

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
762	933	0.87	102552	95.32
764	191	0.18	102743	95.50
765	801	0.74	103544	96.24
767	175	0.16	103719	96.41
768	705	0.66	104424	97.06
771	159	0.15	104583	97.21
772	567	0.53	105150	97.74
775	119	0.11	105269	97.85
776	513	0.48	105782	98.33
779	102	0.09	105884	98.42
780	442	0.41	106326	98.83
784	400	0.37	106726	99.20
789	260	0.24	106986	99.44
790	63	0.06	107049	99.50
794	165	0.15	107214	99.66
796	47	0.04	107261	99.70
801	127	0.12	107388	99.82
803	30	0.03	107418	99.85
808	83	0.08	107501	99.92
813	12	0.01	107513	99.93
818	34	0.03	107547	99.97
823	37	0.03	107584	100.00

Table B23. Scale Score Frequency Distributions – High School Physical Science

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
634	29	0.85	29	0.85
635	16	0.47	45	1.32
644	4	0.12	49	1.43
646	30	0.88	79	2.31
652	12	0.35	91	2.66
654	56	1.64	147	4.30
659	26	0.76	173	5.06
661	108	3.16	281	8.22
664	43	1.26	324	9.48
667	149	4.36	473	13.83
669	78	2.28	551	16.12
671	164	4.80	715	20.91
674	72	2.11	787	23.02
676	166	4.86	953	27.87
678	82	2.40	1035	30.27
680	215	6.29	1250	36.56
681	79	2.31	1329	38.87
684	189	5.53	1518	44.40
685	83	2.43	1601	46.83
687	148	4.33	1749	51.16
688	79	2.31	1828	53.47
690	138	4.04	1966	57.50
691	57	1.67	2023	59.17
693	142	4.15	2165	63.32
694	58	1.70	2223	65.02
696	133	3.89	2356	68.91
697	51	1.49	2407	70.40
698	108	3.16	2515	73.56
700	34	0.99	2549	74.55
701	89	2.60	2638	77.16
702	33	0.97	2671	78.12
703	85	2.49	2756	80.61
704	29	0.85	2785	81.46
706	85	2.49	2870	83.94
707	24	0.70	2894	84.64

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
708	51	1.49	2945	86.14
709	29	0.85	2974	86.98
710	43	1.26	3017	88.24
711	13	0.38	3030	88.62
712	52	1.52	3082	90.14
714	42	1.23	3124	91.37
716	9	0.26	3133	91.63
717	31	0.91	3164	92.54
718	15	0.44	3179	92.98
719	21	0.61	3200	93.59
720	13	0.38	3213	93.97
721	20	0.58	3233	94.56
722	8	0.23	3241	94.79
723	12	0.35	3253	95.14
724	6	0.18	3259	95.32
725	12	0.35	3271	95.67
726	5	0.15	3276	95.82
727	10	0.29	3286	96.11
728	6	0.18	3292	96.29
729	12	0.35	3304	96.64
730	5	0.15	3309	96.78
731	11	0.32	3320	97.10
732	6	0.18	3326	97.28
733	13	0.38	3339	97.66
735	8	0.23	3347	97.89
737	15	0.44	3362	98.33
739	13	0.38	3375	98.71
741	11	0.32	3386	99.03
743	4	0.12	3390	99.15
745	3	0.09	3393	99.24
747	7	0.20	3400	99.44
749	2	0.06	3402	99.50
750	1	0.03	3403	99.53
752	3	0.09	3406	99.62
757	3	0.09	3409	99.71
759	2	0.06	3411	99.77

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
762	3	0.09	3414	99.85
764	1	0.03	3415	99.88
765	2	0.06	3417	99.94
767	1	0.03	3418	99.97
772	1	0.03	3419	100.00

Table B24. Scale Score Frequency Distributions – Grade 4 Social Studies

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
621	20	0.02	20	0.02
629	16	0.01	36	0.03
637	36	0.03	72	0.06
643	76	0.06	148	0.12
648	22	0.02	170	0.14
649	100	0.08	270	0.22
653	180	0.14	450	0.36
657	290	0.23	740	0.59
661	416	0.33	1156	0.92
664	542	0.43	1698	1.35
667	643	0.51	2341	1.86
670	880	0.70	3221	2.57
673	1010	0.80	4231	3.37
675	268	0.21	4499	3.58
676	907	0.72	5406	4.31
678	1366	1.09	6772	5.39
680	1520	1.21	8292	6.61
682	444	0.35	8736	6.96
683	1318	1.05	10054	8.01
684	465	0.37	10519	8.38
685	1477	1.18	11996	9.56
687	2119	1.69	14115	11.24
689	2323	1.85	16438	13.09
691	2449	1.95	18887	15.04
692	618	0.49	19505	15.54
693	1953	1.56	21458	17.09
694	703	0.56	22161	17.65
695	2174	1.73	24335	19.38
696	717	0.57	25052	19.96
697	2176	1.73	27228	21.69
698	2872	2.29	30100	23.98
700	3046	2.43	33146	26.40
702	3069	2.44	36215	28.85
704	3134	2.50	39349	31.34
705	776	0.62	40125	31.96

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
706	2504	1.99	42629	33.96
707	3291	2.62	45920	36.58
709	3350	2.67	49270	39.25
711	3472	2.77	52742	42.01
712	715	0.57	53457	42.58
713	2672	2.13	56129	44.71
714	3353	2.67	59482	47.38
716	3552	2.83	63034	50.21
718	3419	2.72	66453	52.93
719	709	0.56	67162	53.50
720	2862	2.28	70024	55.78
721	704	0.56	70728	56.34
722	2875	2.29	73603	58.63
723	3459	2.76	77062	61.38
725	3543	2.82	80605	64.21
727	3545	2.82	84150	67.03
729	3611	2.88	87761	69.91
731	3465	2.76	91226	72.67
733	3401	2.71	94627	75.38
735	3419	2.72	98046	78.10
737	587	0.47	98633	78.57
738	2665	2.12	101298	80.69
740	3143	2.50	104441	83.19
742	2995	2.39	107436	85.58
744	466	0.37	107902	85.95
745	2338	1.86	110240	87.81
747	2755	2.19	112995	90.01
751	2428	1.93	115423	91.94
753	2164	1.72	117587	93.66
756	1894	1.51	119481	95.17
759	224	0.18	119705	95.35
760	1375	1.10	121080	96.45
763	1410	1.12	122490	97.57
767	1023	0.81	123513	98.39
771	96	0.08	123609	98.46
772	687	0.55	124296	99.01

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
776	83	0.07	124379	99.08
777	446	0.36	124825	99.43
782	373	0.30	125198	99.73
789	197	0.16	125395	99.88
797	92	0.07	125487	99.96
800	53	0.04	125540	100.00

Table B25. Scale Score Frequency Distributions – Grade 6 Social Studies

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
541	16	0.01	16	0.01
542	7	0.01	23	0.02
543	8	0.01	31	0.02
559	11	0.01	42	0.03
560	19	0.02	61	0.05
572	22	0.02	83	0.07
573	11	0.01	94	0.07
582	42	0.03	136	0.11
583	14	0.01	150	0.12
590	93	0.07	243	0.19
592	19	0.02	262	0.21
598	175	0.14	437	0.35
599	41	0.03	478	0.38
604	232	0.18	710	0.56
606	65	0.05	775	0.62
610	353	0.28	1128	0.90
612	116	0.09	1244	0.99
615	484	0.38	1728	1.37
617	133	0.11	1861	1.48
620	602	0.48	2463	1.96
622	170	0.14	2633	2.09
625	708	0.56	3341	2.66
627	194	0.15	3535	2.81
629	846	0.67	4381	3.48
631	258	0.21	4639	3.69
633	926	0.74	5565	4.42
635	289	0.23	5854	4.65
637	1003	0.80	6857	5.45
639	324	0.26	7181	5.71
641	1165	0.93	8346	6.63
643	298	0.24	8644	6.87
644	1160	0.92	9804	7.79
646	346	0.27	10150	8.07
648	1250	0.99	11400	9.06
650	357	0.28	11757	9.34

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
651	1361	1.08	13118	10.42
653	355	0.28	13473	10.71
654	1408	1.12	14881	11.83
656	361	0.29	15242	12.11
657	1499	1.19	16741	13.30
659	394	0.31	17135	13.62
660	1455	1.16	18590	14.77
662	386	0.31	18976	15.08
663	1492	1.19	20468	16.27
665	390	0.31	20858	16.58
666	1555	1.24	22413	17.81
668	355	0.28	22768	18.09
669	1589	1.26	24357	19.36
671	399	0.32	24756	19.67
672	1857	1.48	26613	21.15
674	359	0.29	26972	21.43
676	2196	1.75	29168	23.18
678	1923	1.53	31091	24.71
679	351	0.28	31442	24.99
681	1978	1.57	33420	26.56
682	385	0.31	33805	26.86
683	2000	1.59	35805	28.45
684	379	0.30	36184	28.75
686	2071	1.65	38255	30.40
687	350	0.28	38605	30.68
689	2516	2.00	41121	32.68
691	2121	1.69	43242	34.36
692	401	0.32	43643	34.68
694	2277	1.81	45920	36.49
695	416	0.33	46336	36.82
697	2692	2.14	49028	38.96
700	2754	2.19	51782	41.15
702	380	0.30	52162	41.45
703	2483	1.97	54645	43.42
705	2931	2.33	57576	45.75
708	2917	2.32	60493	48.07

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
710	456	0.36	60949	48.43
711	2657	2.11	63606	50.55
713	425	0.34	64031	50.88
714	2652	2.11	66683	52.99
716	460	0.37	67143	53.36
717	2693	2.14	69836	55.50
719	459	0.36	70295	55.86
720	2841	2.26	73136	58.12
721	450	0.36	73586	58.48
723	2894	2.30	76480	60.78
725	443	0.35	76923	61.13
727	3488	2.77	80411	63.90
730	2992	2.38	83403	66.28
731	482	0.38	83885	66.66
734	3594	2.86	87479	69.52
737	3677	2.92	91156	72.44
741	3580	2.84	94736	75.28
745	3574	2.84	98310	78.12
749	3470	2.76	101780	80.88
755	3489	2.77	105269	83.65
758	3282	2.61	108551	86.26
763	3224	2.56	111775	88.82
768	351	0.28	112126	89.10
769	2515	2.00	114641	91.10
774	318	0.25	114959	91.35
775	2295	1.82	117254	93.18
781	2289	1.82	119543	95.00
789	1997	1.59	121540	96.58
797	1397	1.11	122937	97.69
799	126	0.10	123063	97.79
807	1120	0.89	124183	98.68
811	85	0.07	124268	98.75
820	745	0.59	125013	99.34
828	42	0.03	125055	99.38
829	783	0.62	125838	100.00

**Table B26. Scale Score Frequency Distributions –
High School American Government**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
642	72	0.08	72	0.08
643	51	0.06	123	0.14
644	16	0.02	139	0.16
651	86	0.10	225	0.26
652	31	0.04	256	0.30
657	100	0.12	356	0.41
658	28	0.03	384	0.44
661	117	0.13	501	0.58
662	39	0.04	540	0.62
665	166	0.19	706	0.81
666	54	0.06	760	0.88
668	208	0.24	968	1.12
670	79	0.09	1047	1.21
671	310	0.36	1357	1.56
672	130	0.15	1487	1.71
674	423	0.49	1910	2.20
675	168	0.19	2078	2.40
676	601	0.69	2679	3.09
677	218	0.25	2897	3.34
678	773	0.89	3670	4.23
680	1134	1.31	4804	5.54
682	1358	1.57	6162	7.11
684	1583	1.83	7745	8.93
685	341	0.39	8086	9.32
686	1331	1.53	9417	10.86
687	1849	2.13	11266	12.99
689	1994	2.30	13260	15.29
690	1935	2.23	15195	17.52
692	2122	2.45	17317	19.97
693	2111	2.43	19428	22.40
695	2112	2.44	21540	24.84
696	2214	2.55	23754	27.39
697	375	0.43	24129	27.82
698	1746	2.01	25875	29.84

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
699	2189	2.52	28064	32.36
700	2144	2.47	30208	34.83
701	2127	2.45	32335	37.29
703	2118	2.44	34453	39.73
704	2221	2.56	36674	42.29
705	2087	2.41	38761	44.70
706	356	0.41	39117	45.11
707	1826	2.11	40943	47.21
708	2071	2.39	43014	49.60
709	2104	2.43	45118	52.03
710	2154	2.48	47272	54.51
711	375	0.43	47647	54.94
712	2205	2.54	49852	57.49
713	1778	2.05	51630	59.54
714	2145	2.47	53775	62.01
715	2113	2.44	55888	64.45
716	300	0.35	56188	64.79
717	2126	2.45	58314	67.24
718	1991	2.30	60305	69.54
719	1722	1.99	62027	71.52
720	286	0.33	62313	71.85
721	2039	2.35	64352	74.21
722	2002	2.31	66354	76.51
724	1969	2.27	68323	78.78
725	1882	2.17	70205	80.96
726	265	0.31	70470	81.26
727	1548	1.79	72018	83.05
728	1810	2.09	73828	85.13
729	263	0.30	74091	85.44
730	1388	1.60	75479	87.04
731	1620	1.87	77099	88.90
733	1489	1.72	78588	90.62
734	213	0.25	78801	90.87
735	1152	1.33	79953	92.20
736	163	0.19	80116	92.38
737	1066	1.23	81182	93.61

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
738	181	0.21	81363	93.82
739	978	1.13	82341	94.95
740	165	0.19	82506	95.14
741	822	0.95	83328	96.09
742	127	0.15	83455	96.23
743	719	0.83	84174	97.06
744	125	0.14	84299	97.21
745	598	0.69	84897	97.90
747	89	0.10	84986	98.00
748	485	0.56	85471	98.56
750	63	0.07	85534	98.63
751	354	0.41	85888	99.04
753	40	0.05	85928	99.09
754	292	0.34	86220	99.42
757	32	0.04	86252	99.46
758	202	0.23	86454	99.69
761	22	0.03	86476	99.72
763	126	0.15	86602	99.86
767	9	0.01	86611	99.87
769	62	0.07	86673	99.94
774	48	0.06	86721	100.00

**Table B27. Scale Score Frequency Distributions –
High School American History**

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
619	129	0.11	129	0.11
629	16	0.01	145	0.12
630	56	0.05	201	0.16
637	15	0.01	216	0.18
638	69	0.06	285	0.23
644	114	0.09	399	0.32
649	35	0.03	434	0.35
650	163	0.13	597	0.49
654	312	0.25	909	0.74
658	485	0.39	1394	1.13
662	670	0.55	2064	1.68
665	919	0.75	2983	2.43
668	230	0.19	3213	2.62
669	1003	0.82	4216	3.43
671	285	0.23	4501	3.66
672	1147	0.93	5648	4.60
674	1575	1.28	7223	5.88
677	1824	1.48	9047	7.36
679	1912	1.56	10959	8.92
681	415	0.34	11374	9.26
682	1599	1.30	12973	10.56
684	2050	1.67	15023	12.23
686	2084	1.70	17107	13.93
688	2181	1.78	19288	15.70
690	2163	1.76	21451	17.46
692	2185	1.78	23636	19.24
694	2171	1.77	25807	21.01
696	2358	1.92	28165	22.93
698	2351	1.91	30516	24.84
700	2420	1.97	32936	26.81
701	420	0.34	33356	27.15
702	1921	1.56	35277	28.72
703	2446	1.99	37723	30.71
705	2531	2.06	40254	32.77

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
706	506	0.41	40760	33.18
707	2193	1.79	42953	34.97
708	2647	2.15	45600	37.12
710	2696	2.19	48296	39.32
711	466	0.38	48762	39.70
712	2245	1.83	51007	41.52
713	2829	2.30	53836	43.83
715	2927	2.38	56763	46.21
716	2911	2.37	59674	48.58
718	2974	2.42	62648	51.00
720	3073	2.50	65721	53.50
721	3182	2.59	68903	56.09
723	3165	2.58	72068	58.67
725	3250	2.65	75318	61.31
726	527	0.43	75845	61.74
727	2654	2.16	78499	63.90
728	3095	2.52	81594	66.42
730	3362	2.74	84956	69.16
732	3213	2.62	88169	71.78
734	3262	2.66	91431	74.43
736	3140	2.56	94571	76.99
738	3178	2.59	97749	79.57
740	3072	2.50	100821	82.08
742	3009	2.45	103830	84.52
745	2818	2.29	106648	86.82
747	2730	2.22	109378	89.04
750	2516	2.05	111894	91.09
753	2387	1.94	114281	93.03
756	1997	1.63	116278	94.66
760	1794	1.46	118072	96.12
764	1490	1.21	119562	97.33
768	1162	0.95	120724	98.28
773	913	0.74	121637	99.02
779	616	0.50	122253	99.52
786	329	0.27	122582	99.79
795	173	0.14	122755	99.93

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
800	85	0.07	122840	100.00