

CMAS Mathematics & ELA (including CSLA)

Technical Report 2018 - Figures

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CMAS Mathematics Blueprints: Percentage Targets

Grades 3-5

	Grade 3			Grade 4			Grade 5	
	2017	2018		2017	2018		2017	2018
Type 1	61%	61-62%		61%	61-62%		61%	61-62%
1.1	48%	49-50%		39%	37-38%		39%	37-38%
1.2	12%	12%		21%	24%		21%	24%
1.4	-	-		-	-		-	-
Subclaim A: Major Content	42%	43-44%		47%	47-48%		45%	45-46%
Subclaim B: Supporting Content	18%	18%		14%	14%		15%	16%
Type 2	21%	20-22%		21%	20-22%		21%	20-22%
2.3	9%	6-12%		9%	6-12%		9%	6-12%
2.4	12%	8-16%		12%	8-16%		12%	8-16%
Subclaim C: Expressing Mathematical Reasoning	21%	20-22%		21%	20-22%		21%	20-22%
Type 3	18%	18%		18%	18%		18%	18%
3.3	9%	6%		9%	6%		9%	6%
3.6	9%	12%		9%	12%		9%	12%
Subclaim D: Modeling and Application	18%	18%		18%	18%		18%	18%
Calculator	-	-		-	-		-	-
Non-calculator	100%	100%		100%	100%		100%	100%
Total (produces scale score and performance level)	100% 66 points	100% 50-51 points		100% 66 points	100% 50-51 points		100% 66 points	100% 50-51 points

Figure 1. Mathematics Grades 3–5 Blueprint

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CMAS Mathematics Blueprints: Percentage Targets

Grades 6-8

	Grade 6			Grade 7			Grade 8	
	2017	2018		2017	2018		2017	2018
Type 1	61%	61-62%		61%	61-62%		61%	61-62%
1.1	36%	37-38%		36%	37-38%		33%	33-34%
1.2	18%	16%		18%	16%		15%	12-20%
1.4	6%	8%		6%	8%		12%	8-16%
Subclaim A: Major Content	39%	39-40%		44%	45-46%		41%	41-42%
Subclaim B: Supporting Content	21%	22%		17%	16%		20%	20%
Type 2	21%	20-22%		21%	20-22%		21%	20-22%
2.3	9%	6-12%		9%	6-12%		9%	6-12%
2.4	12%	8-16%		12%	8-16%		12%	8-16%
Subclaim C: Expressing Mathematical Reasoning	21%	20-22%		21%	20-22%		21%	20-22%
Type 3	18%	18%		18%	18%		18%	18%
3.3	9%	6%		9%	6%		9%	6%
3.6	9%	12%		9%	12%		9%	12%
Subclaim D: Modeling and Application	18%	18%		18%	18%		18%	18%
Calculator	73%	72-73%		76%	76%		71-73%	72-73%
Non-calculator	27%	27-28%		24%	24%		27-29%	27-28%
Total (produces scale score and performance level)	100% 66 points	100% 50-51 points		100% 66 points	100% 50-51 points		100% 66 points	100% 50-51 points

Figure 2. Mathematics Grades 6–8 Blueprint

CMAS Mathematics & ELA (including CSLA)

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CMAS English Language Arts/Literacy Blueprints: Percentage Targets

Grades 3-5

	Grade 3		Grade 4		Grade 5	
	2017	2018 (includes CSLA)	2017	2018 (includes CSLA)	2017	2018
Reading (produces scale score)	76% (62%)	77% (63%)	76% (61%)	78% (63%)	76% (61%)	77% (62%)
Literary Text	33-36% (27-29%)	32% (26%)	29-31% (23-25%)	31-34% (25-27%)	29-33% (23-26%)	32% (25%)
Informational Text	25-28% (20-22%)	26% (22%)	29% (23%)	31% (25%)	29-31% (23-25%)	32% (25%)
Vocabulary	16-18% (13-15%)	19% (15%)	17-19% (13-15%)	14-17% (11-14%)	14-19% (11-15%)	14% (11%)
Writing	24% (38%)	23% (37%)	24% (39%)	22% (37%)	24% (39%)	23% (38%)
Writing Expression	12% (29%)	11% (28%)	13% (31%)	12% (29%)	13% (31%)	12% (30%)
Knowledge and Use of Language Conventions	12% (10%)	11% (9%)	11% (8%)	10% (8%)	11% (8%)	10% (8%)
Total (produces scale score and performance level)	100% 76 (94) points	100% 53 (65) points	100% 84 (106) points	100% 59 (73) points	100% 84 (106) points	100% 57 (71) points

Percentages and numbers without parentheses are based on unweighted scores. Percentages and numbers with parentheses are based on weighted scores.

Scores may not add up as expected due to rounding.

3/16/2018

Figure 3. ELA Grades 3–5 Blueprint

CMAS Mathematics & ELA (including CSLA)

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CMAS English Language Arts/Literacy Blueprints: Percentage Targets

Grades 6-8

	Grade 6		Grade 7		Grade 8	
	2017	2018	2017	2018	2017	2018
Reading (produces scale score)	78% (63%)	77% (62%)	78% (63%)	78% (63%)	78% (63%)	78% (63%)
Literary Text	23-29% (18-23%)	26-29% (21-23%)	25-27% (20-21%)	28% (23%)	16-31% (13-25%)	28% (23%)
Informational Text	33-37% (26-30%)	35% (28%)	33-37% (26-30%)	34% (28%)	33-41% (26-33%)	34% (28%)
Vocabulary	16-21% (13-17%)	13-16% (10-13%)	16-21% (13-17%)	16% (13%)	14-21% (12-17%)	16% (13%)
Writing	22% (37%)	23% (38%)	22% (37%)	22% (38%)	22% (37%)	22% (38%)
Writing Expression	12% (30%)	13% (31%)	12% (30%)	13% (30%)	12% (30%)	13% (30%)
Knowledge and Use of Language Conventions	9% (7%)	10% (8%)	9% (7%)	9% (8%)	9% (7%)	9% (8%)
Total (produces scale score and performance level)	100% 97 (121) points	100% 62 (78) points	100% 97 (121) points	100% 64 (80) points	100% 97 (121) points	100% 64 (80) points

Percentages and numbers without parentheses are based on unweighted scores. Percentages and numbers with parentheses are based on weighted scores.

Scores may not add up as expected due to rounding.

3/16/2018

Figure 4. ELA Grades 6–8 Blueprint

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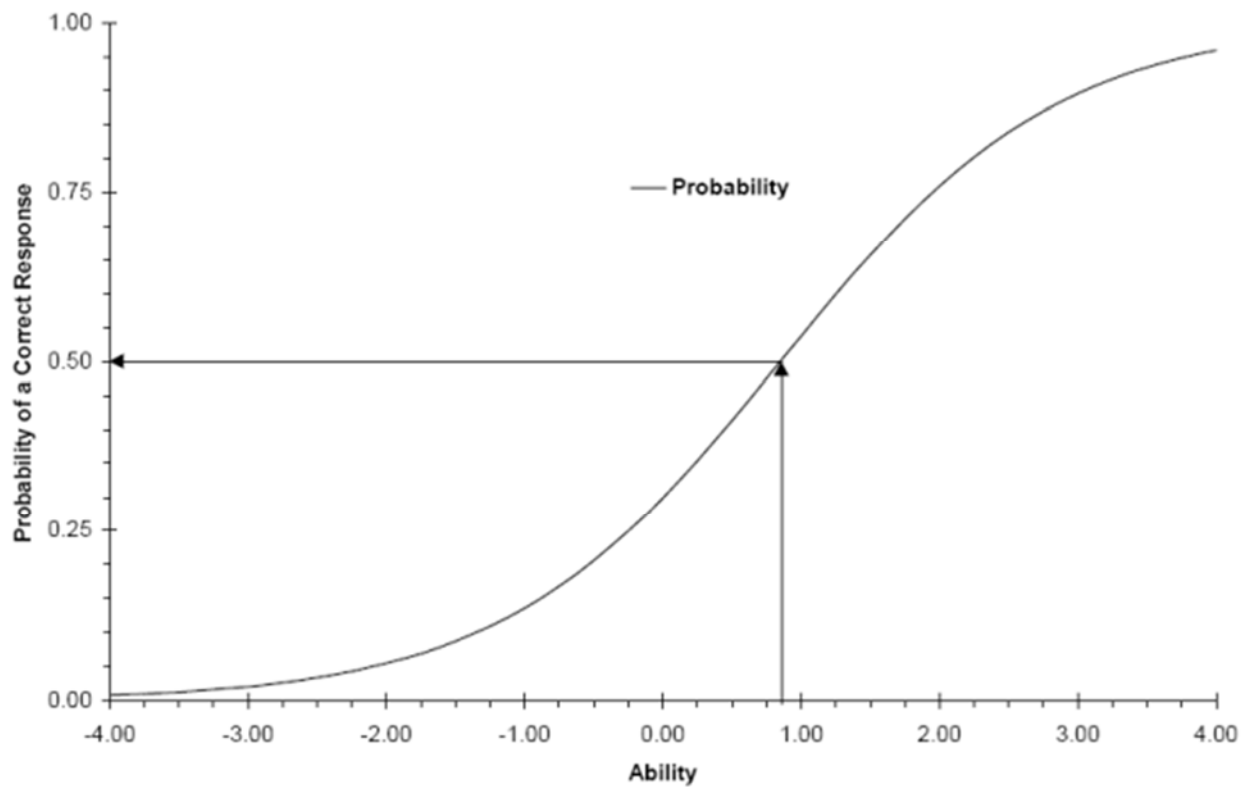


Figure 5. Sample 2PL Item Characteristic Curve

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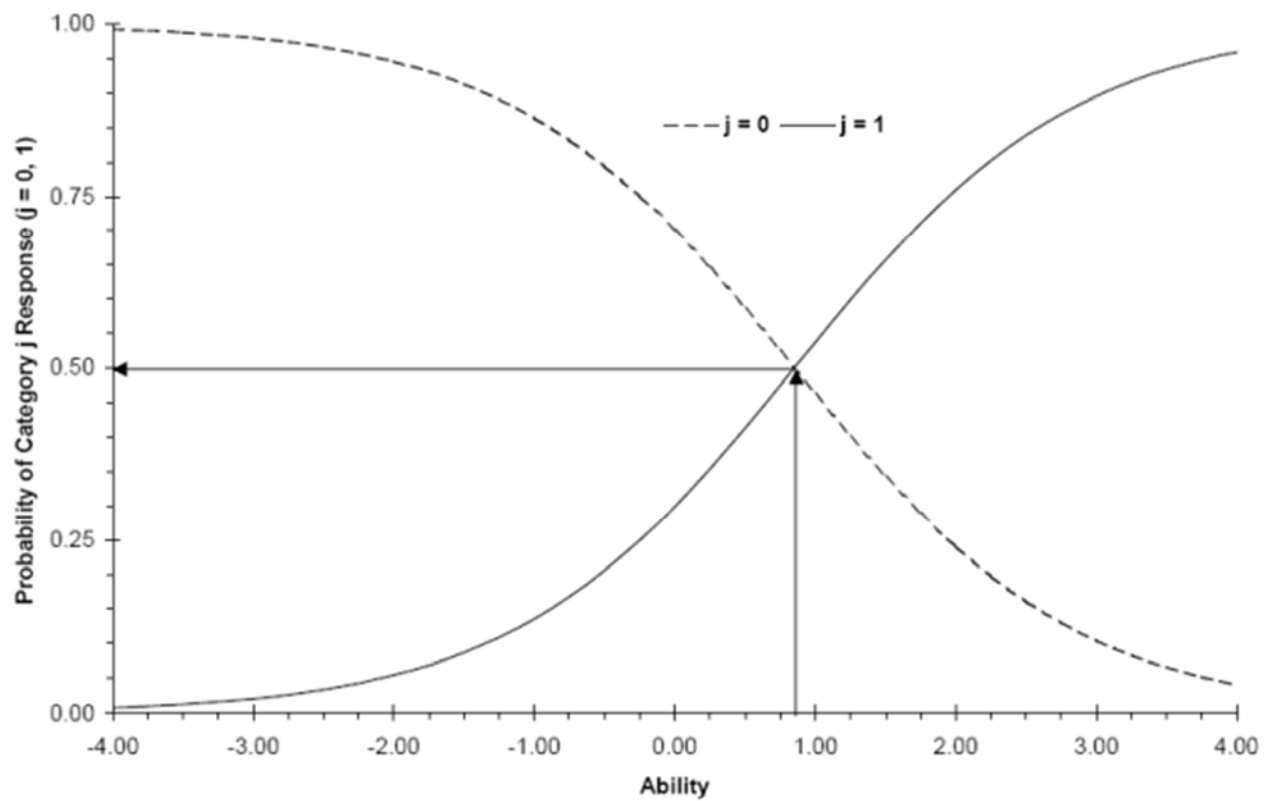


Figure 6. Sample 2PL Item Response Curves

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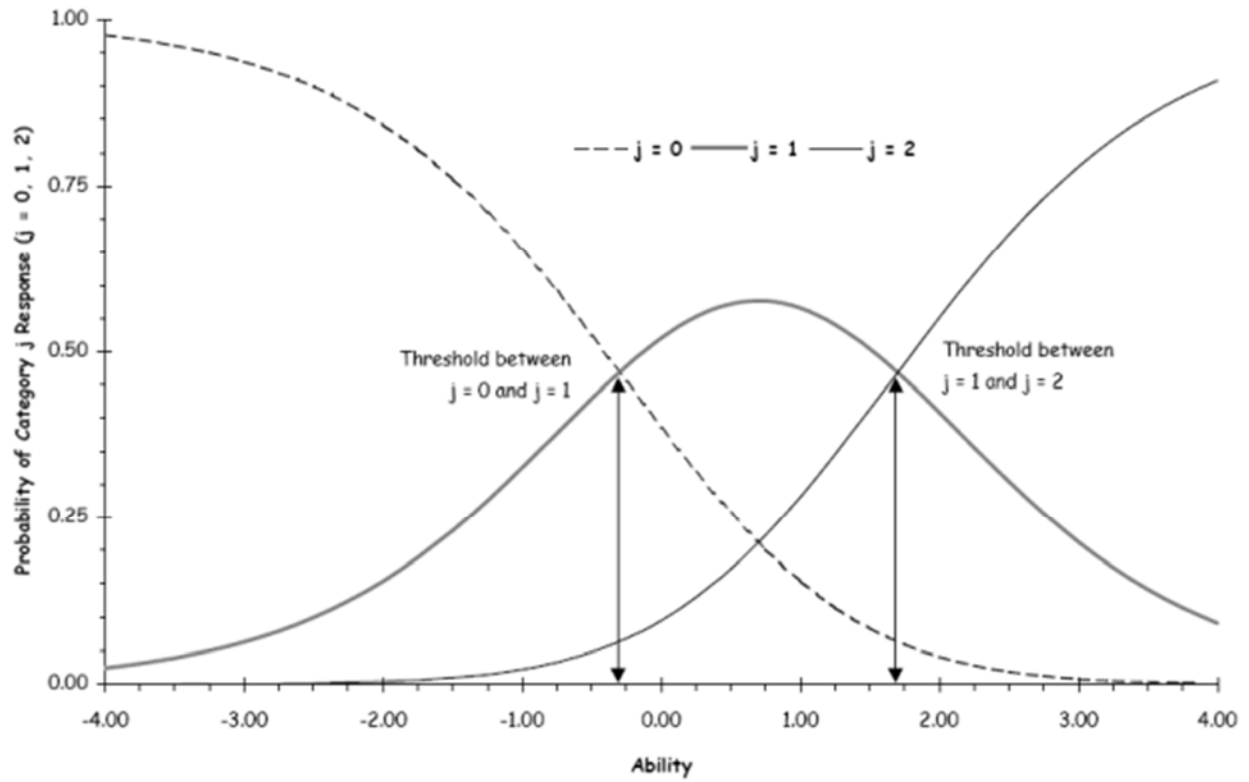


Figure 7. Item Response Curves for a 2-point Item

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Item	Form	Key	Corr.	*	PV<15	A%	*	B%	*	C%	*	D%	*	Omit%	Ncount
1	ALL	B	0.49			11		46		24		17		3	6578
2	ALL	D	0.46			17		12		9		59		2	6560
3	ALL	B	0.40			16		50		16		12		6	6572
4	ALL	D	0.47			5		9		21		63		2	6605
5	ALL	C	0.40			3		19		51		26		2	6643
6	ALL	C	0.46			12		5		78		4		2	6614
7	ALL	A	0.30			33		36		15		13		3	6643
8	ALL	C	0.43			21		35		35		6		3	6646

Figure 8. Sample Keycheck Report

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Item ID	Func.	Item Response	Scored Response	Freq. Count	% of Total Freq.	Date 1 st Reviewer	1 st Reviewer Initials	Issue? (Y/N)	Description of Issue	Date 2 nd Reviewer	2 nd Reviewer Initials	Issue? (Y/N)	Description of Issue
Item1		A_A1:B_B2	2	28339	59								
Item1		A_A1	1	35	0								
Item1		A_A1:A_A2	1	3782	8								
Item1		A_A1:C_C2	1	4803	10								
Item1		A_A1:D_D2	1	970	2								
Item1			0	56	0								
Item1		A_A2	0	1	0								
Item1		B_B1	0	12	0								
Item1		B_B1:A_A2	0	464	1								
Item1		B_B1:B_B2	0	1038	2								
Item1		B_B1:C_C2	0	844	2								
Item1		B_B1:D_D2	0	405	1								
Item1		B_B2	0	4	0								
Item1		C_C1	0	10	0								
Item1		C_C1:A_A2	0	501	1								
Item1		C_C1:B_B2	0	841	2								
Item1		C_C1:C_C2	0	582	1								
Item1		C_C1:D_D2	0	1510	3								
Item1		C_C2	0	1	0								
Item1		D_D1	0	10	0								
Item1		D_D1:A_A2	0	652	1								

Figure 9. Sample Adjudication Spreadsheet

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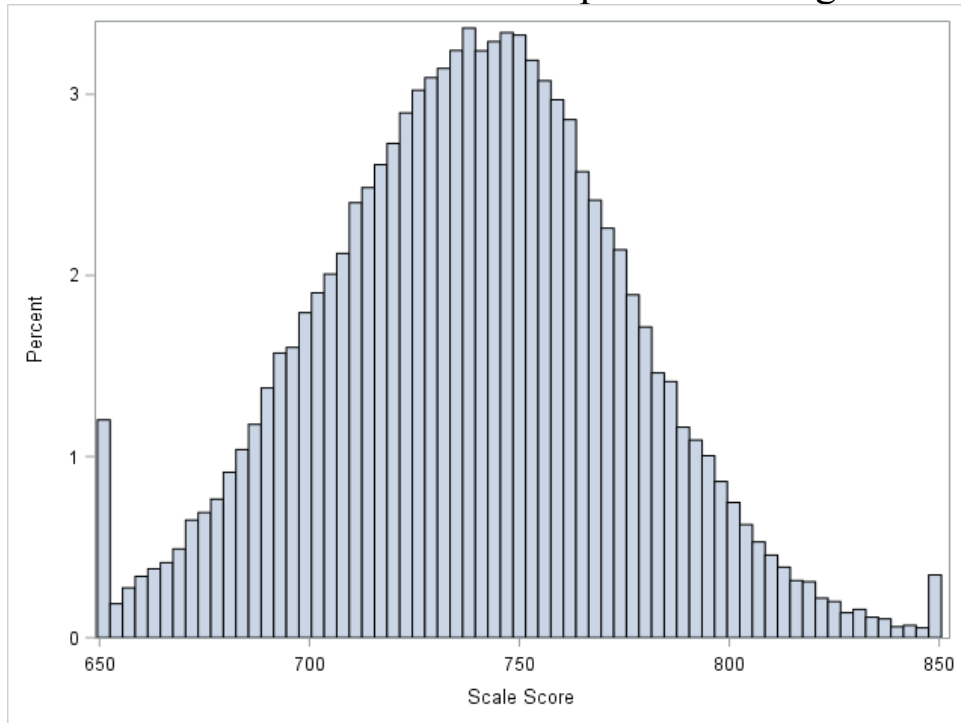


Figure 10. Mathematics Grade 3 Scale Score Distribution

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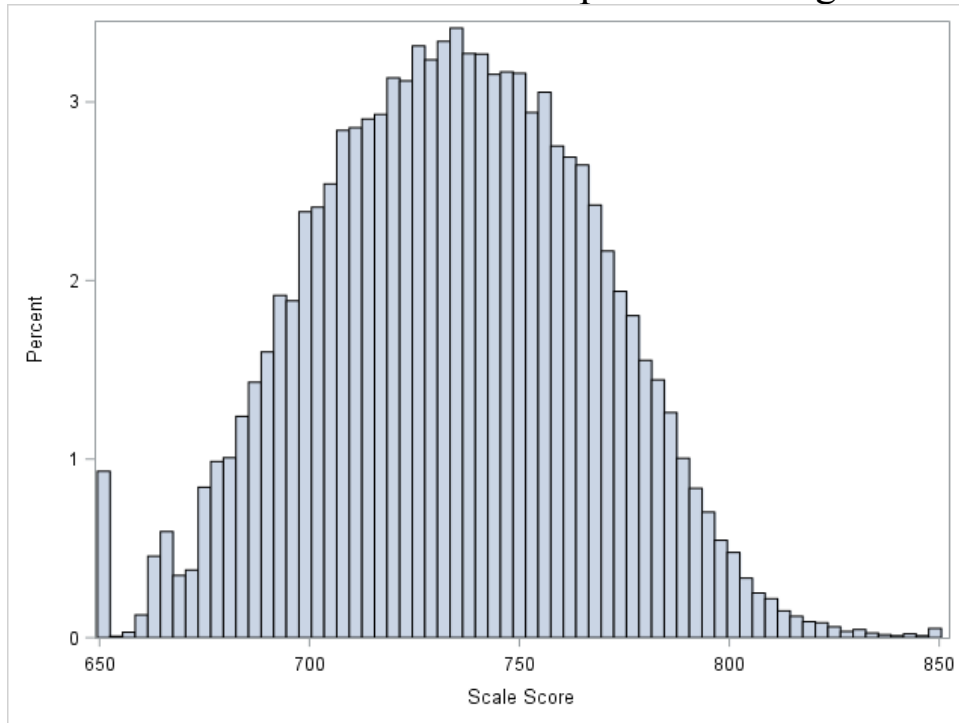


Figure 11. Mathematics Grade 4 Scale Score Distribution

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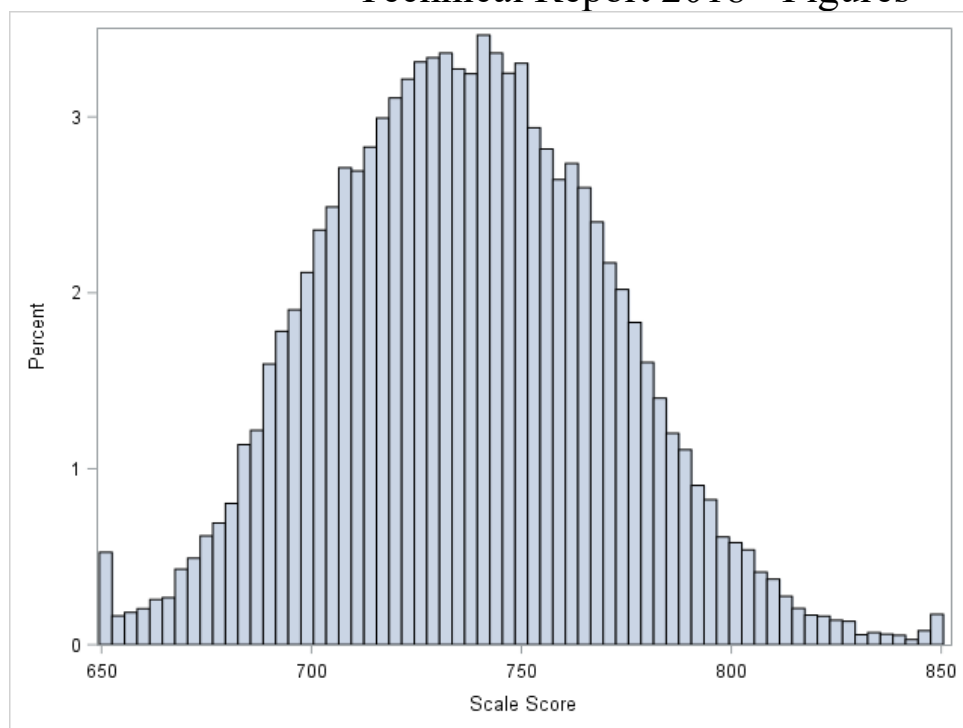


Figure 12. Mathematics Grade 5 Scale Score Distribution

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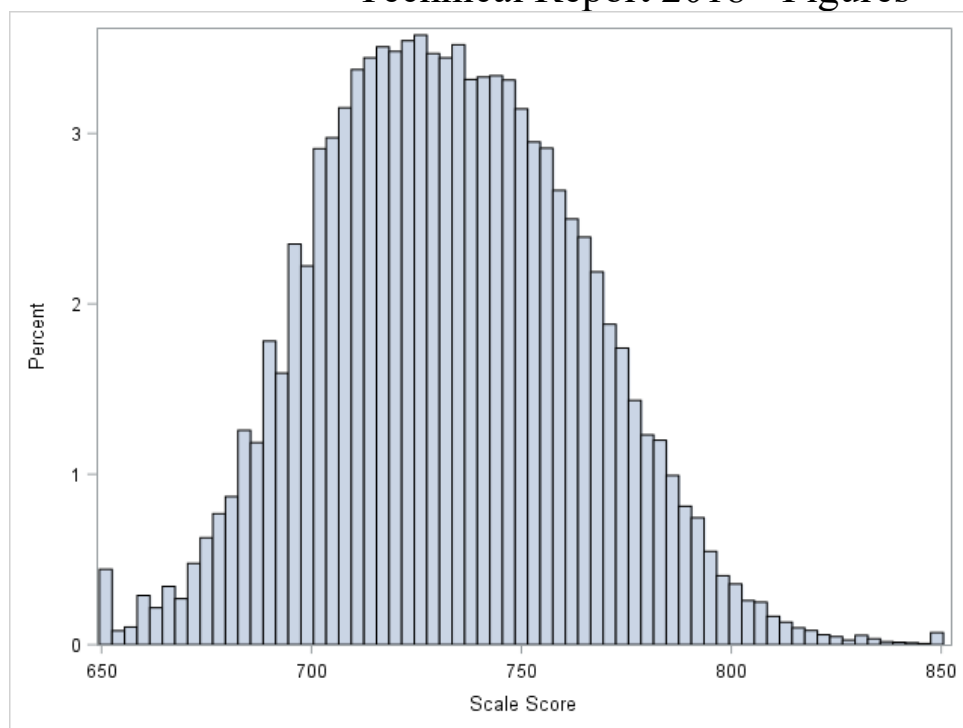
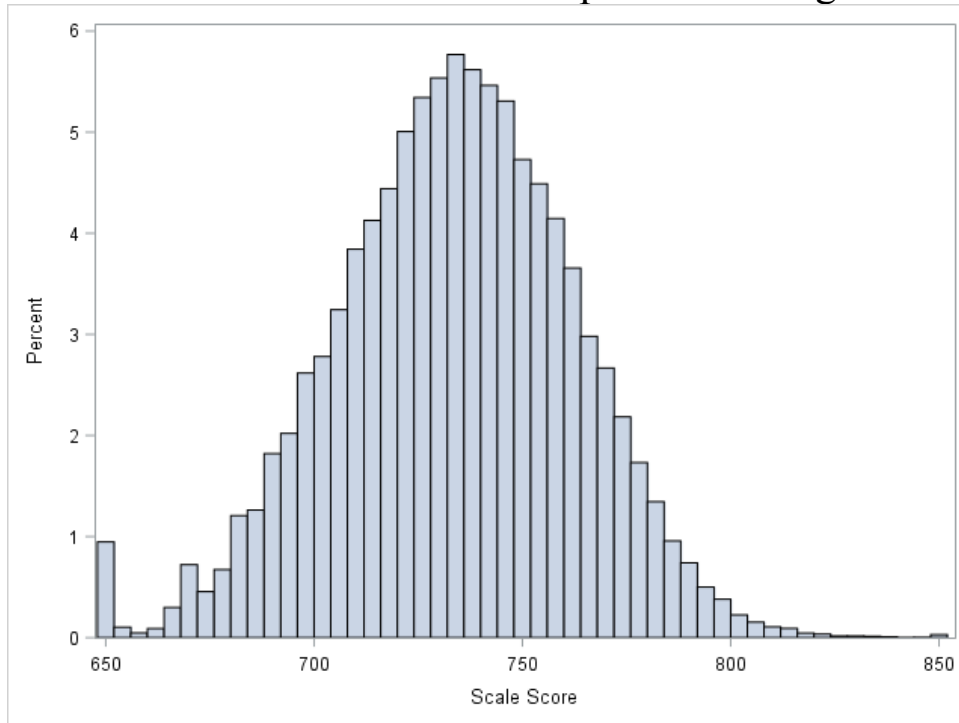


Figure 13. Mathematics Grade 6 Scale Score Distribution

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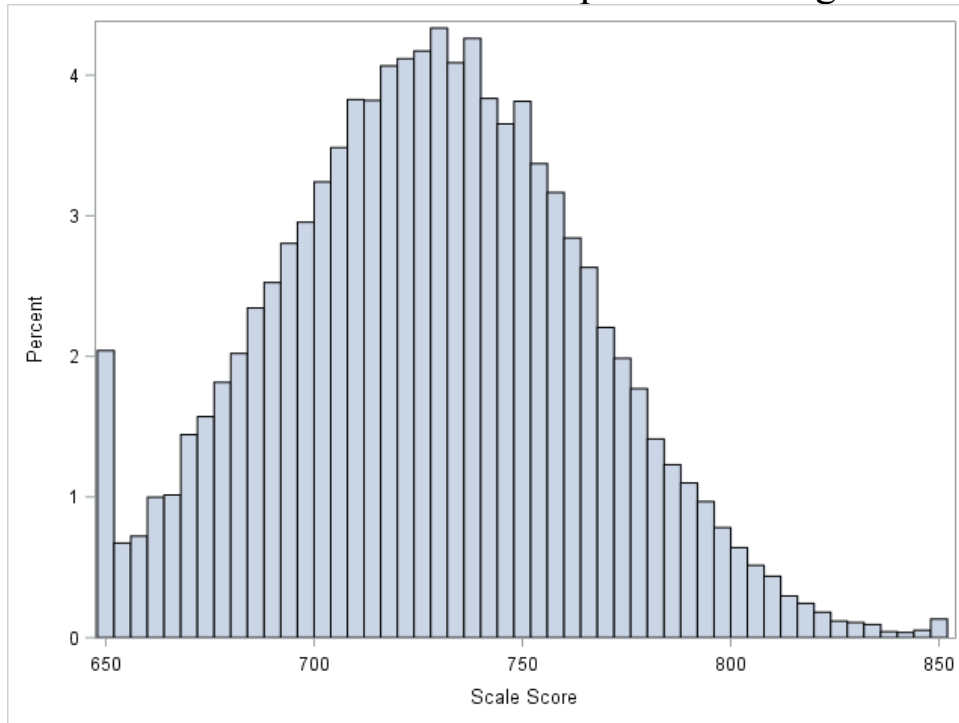


Figure 15. Mathematics Grade 8 Scale Score Distribution

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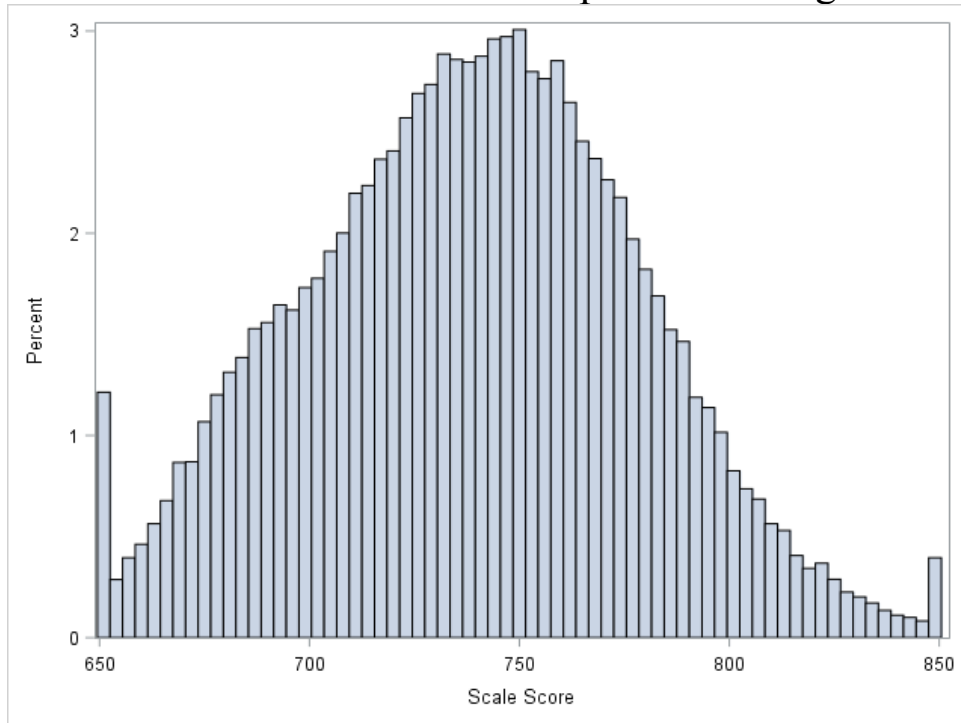


Figure 16. ELA Grade 3 Scale Score Distribution

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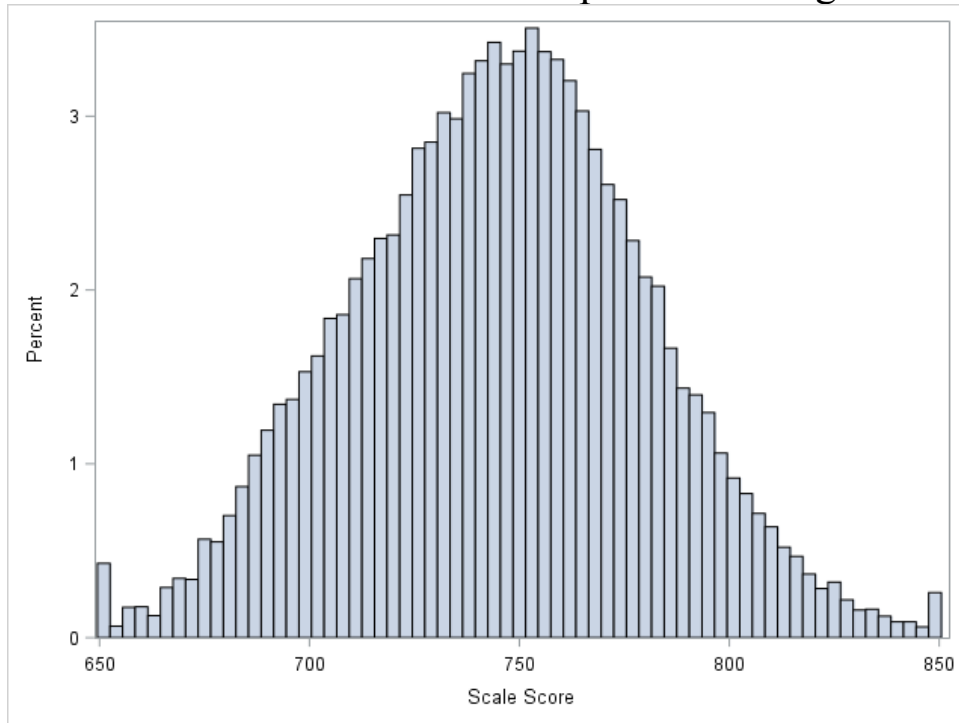


Figure 17. ELA Grade 4 Scale Score Distribution

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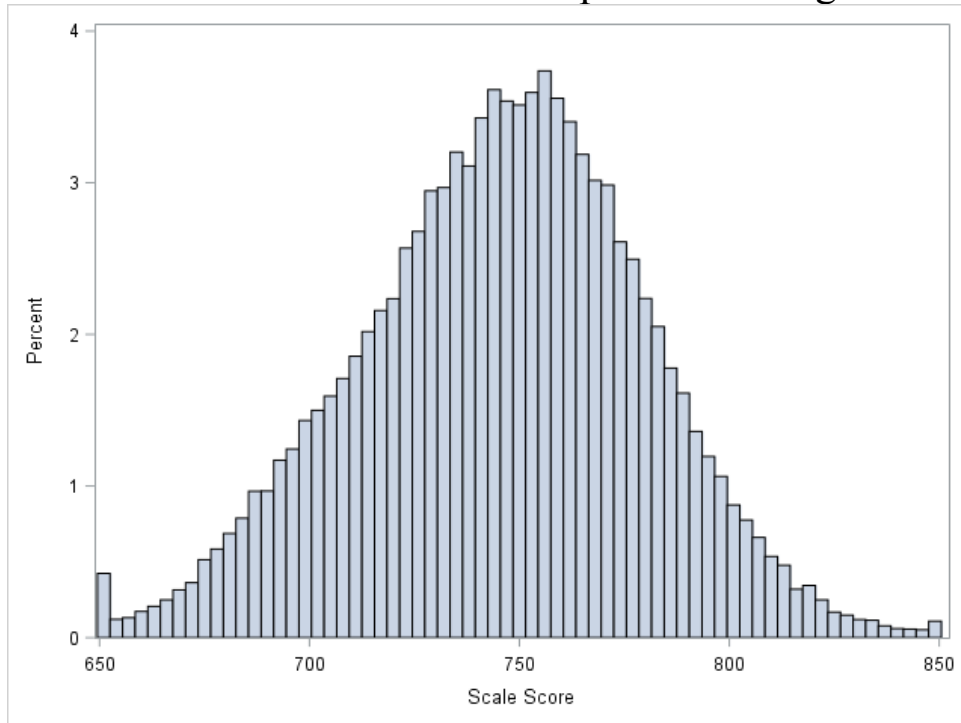


Figure 18. ELA Grade 5 Scale Score Distribution

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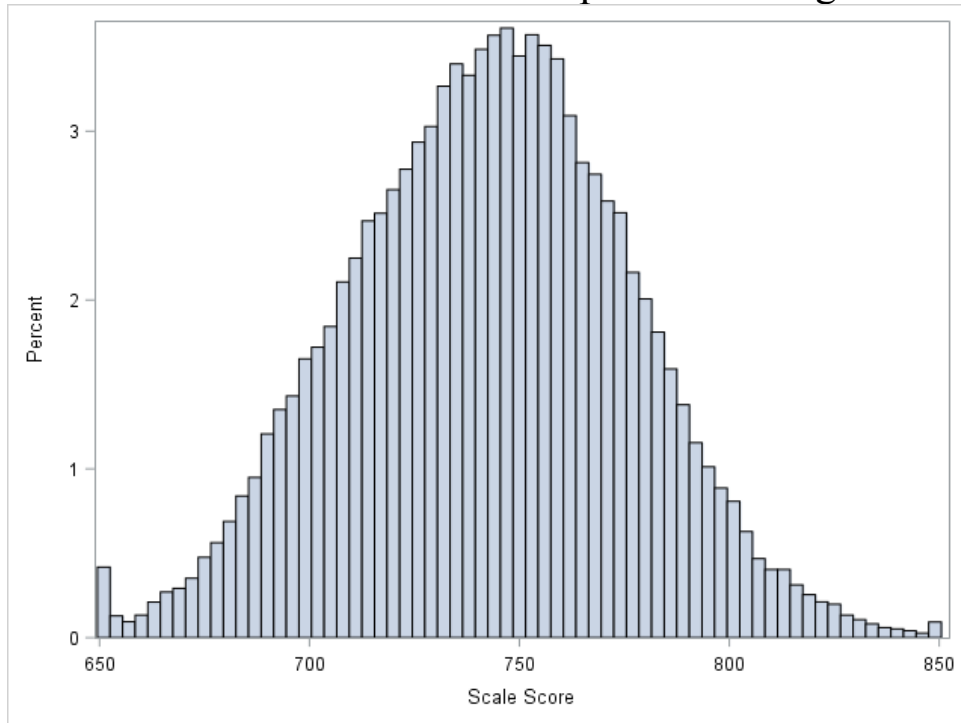


Figure 19. ELA Grade 6 Scale Score Distribution

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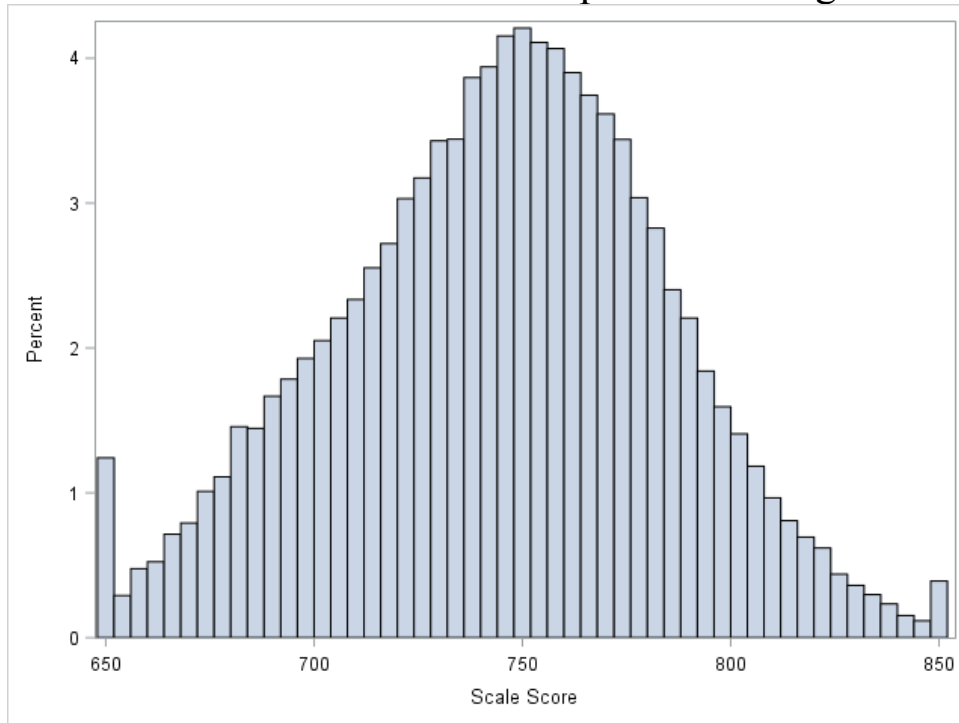


Figure 20. ELA Grade 7 Scale Score Distribution

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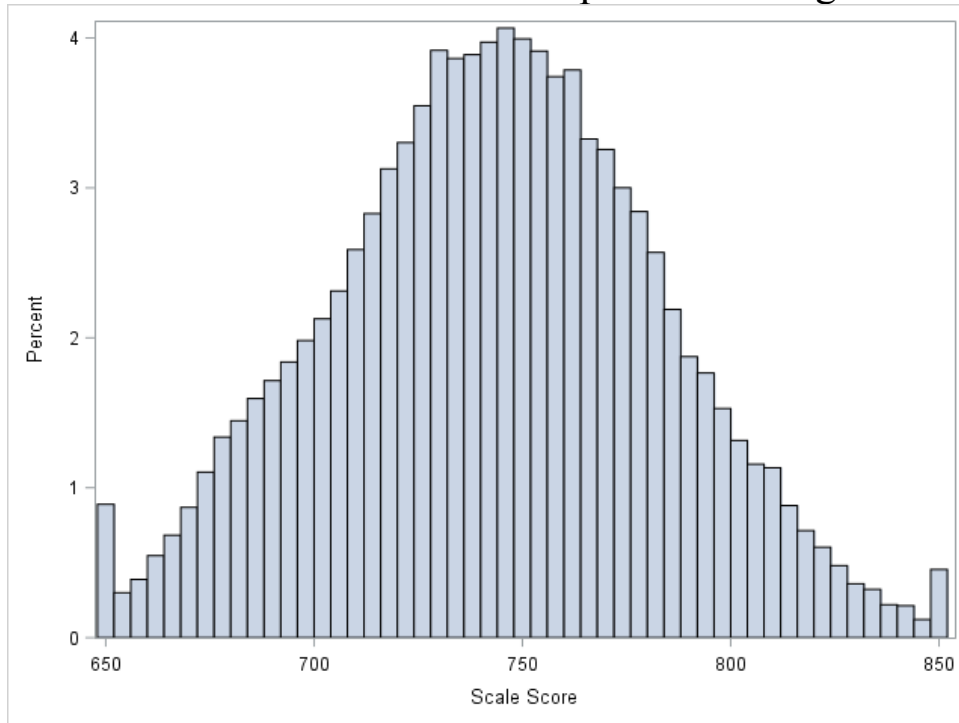


Figure 21. ELA Grade 8 Scale Score Distribution

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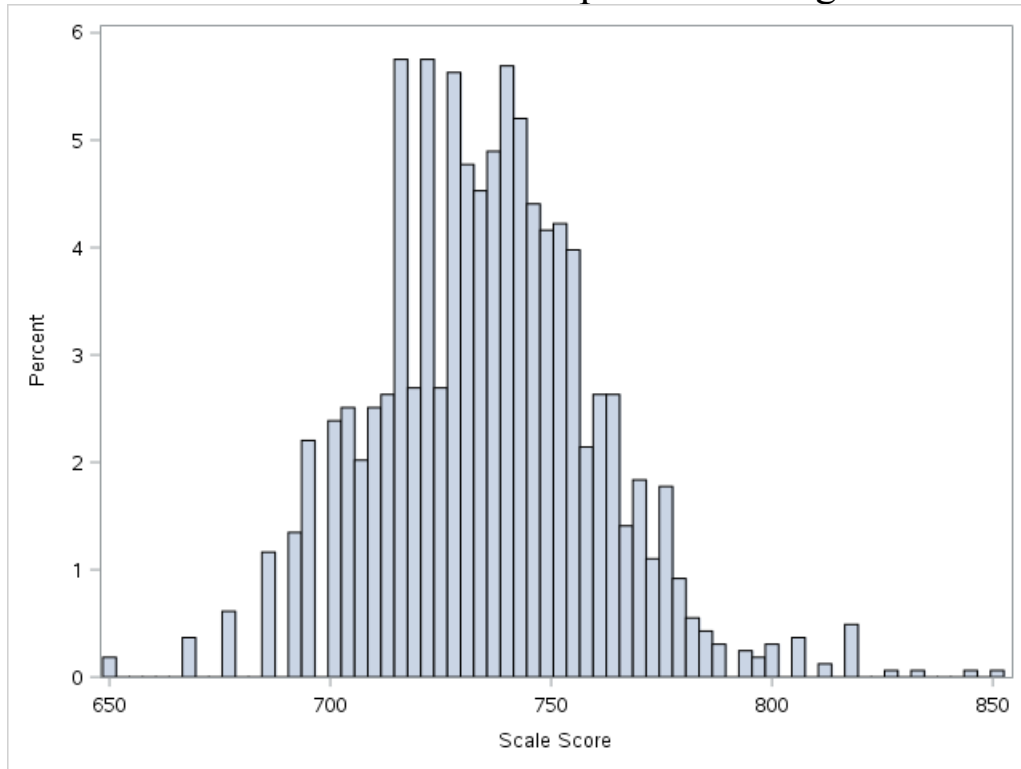


Figure 22. CSLA Grade 3 Scale Score Distribution

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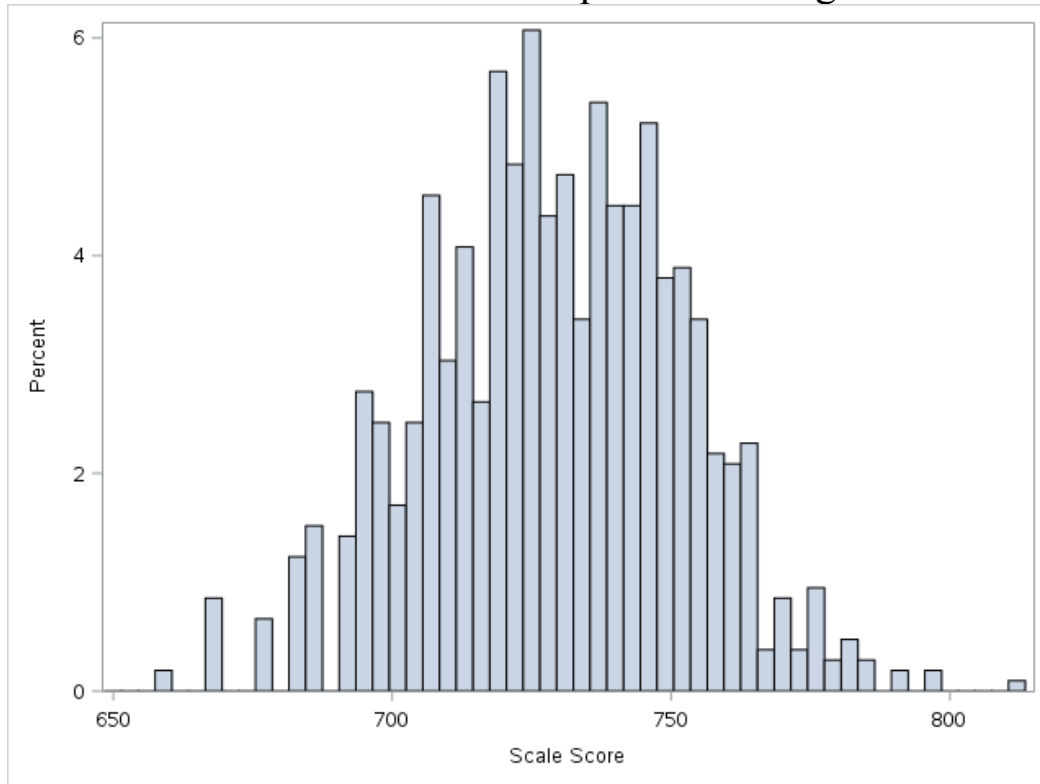


Figure 23. CSLA Grade 4 Scale Score Distribution

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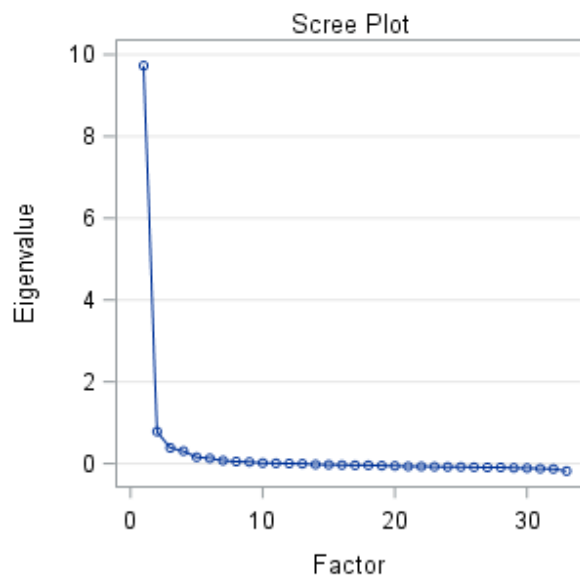


Figure 24. Mathematics Grade 3 Scree Plot

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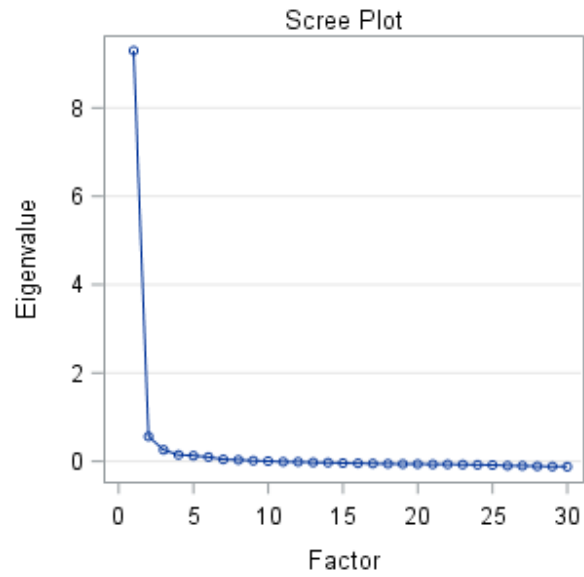


Figure 25. Mathematics Grade 4 Scree Plot

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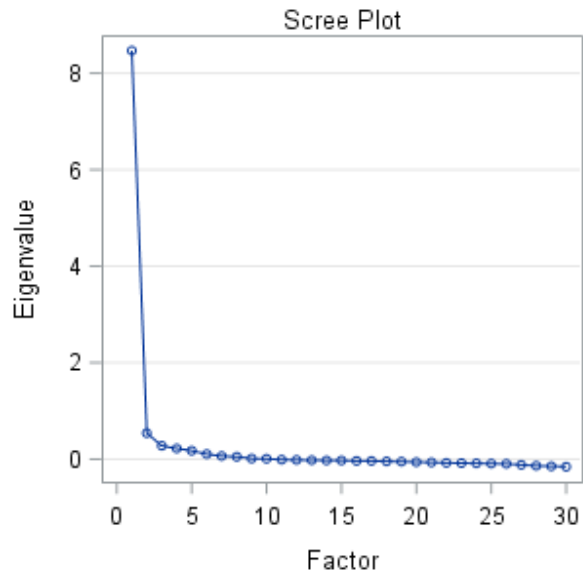


Figure 26. Mathematics Grade 5 Scree Plot

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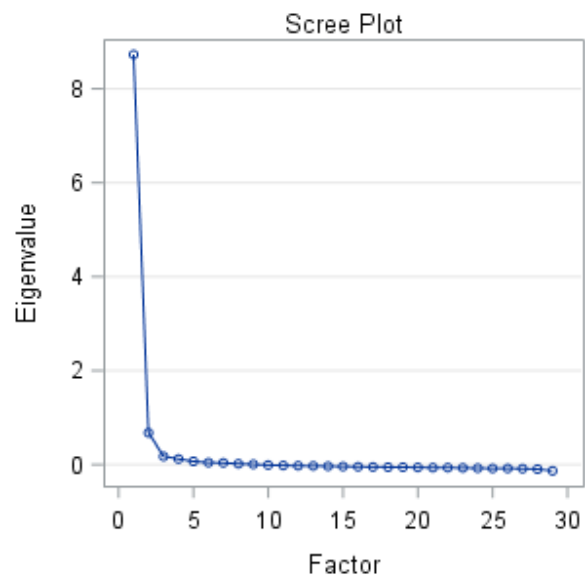


Figure 27. Mathematics Grade 6 Scree Plot

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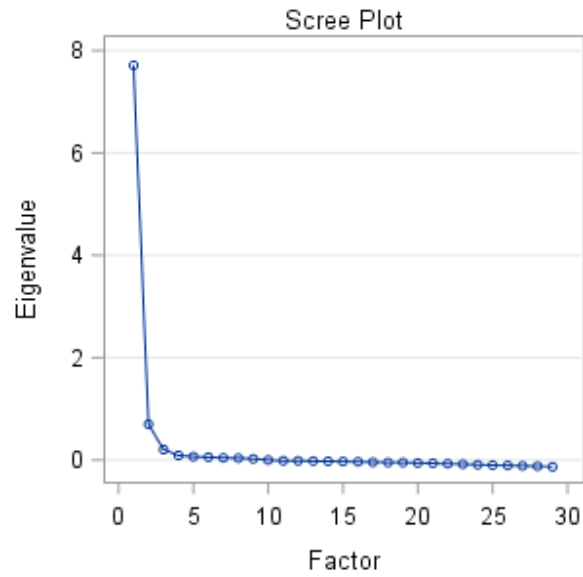


Figure 28. Mathematics Grade 7 Scree Plot

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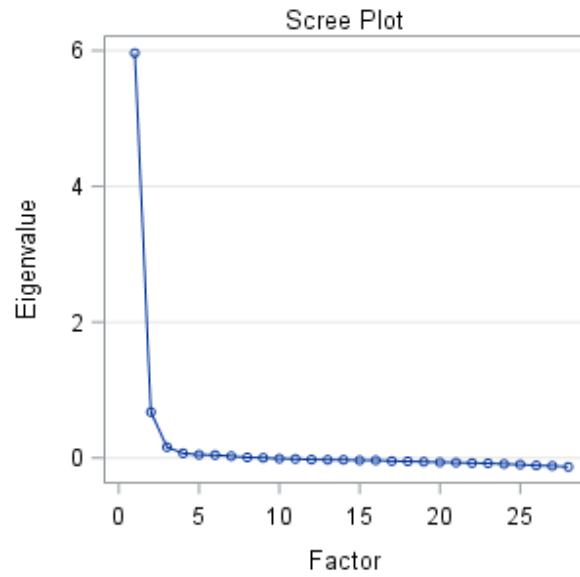


Figure 29. Mathematics Grade 8 Scree Plot

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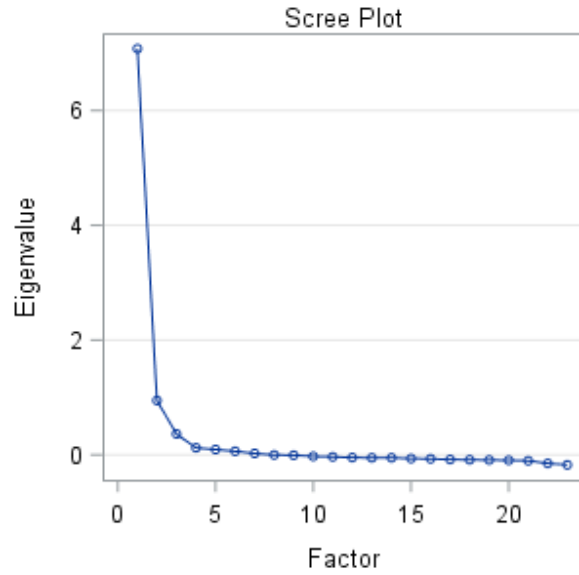


Figure 30. ELA Grade 3 Scree Plot

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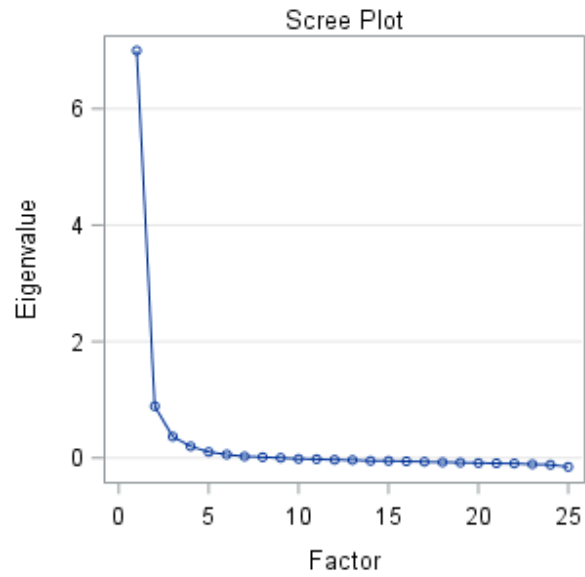


Figure 31. ELA Grade 4 Scree Plot

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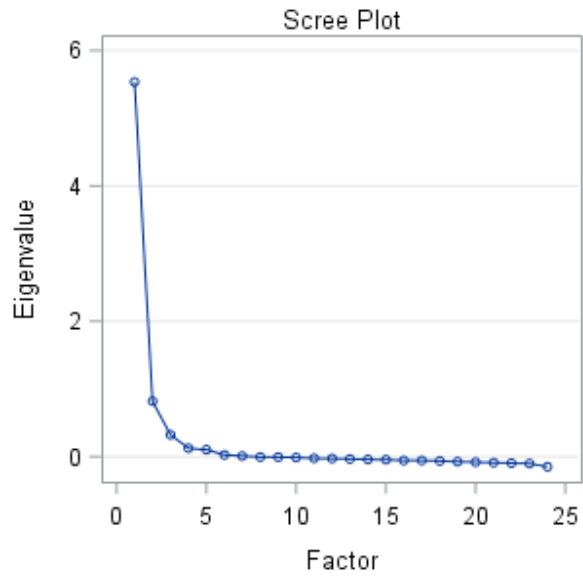


Figure 32. ELA Grade 5 Scree Plot

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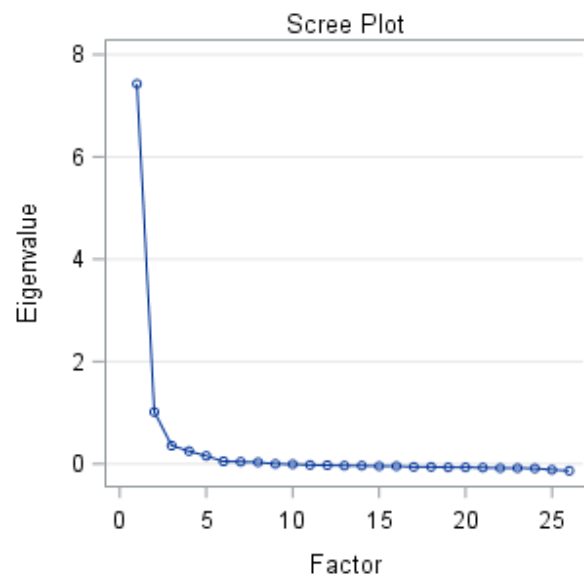


Figure 33. ELA Grade 6 Scree Plot

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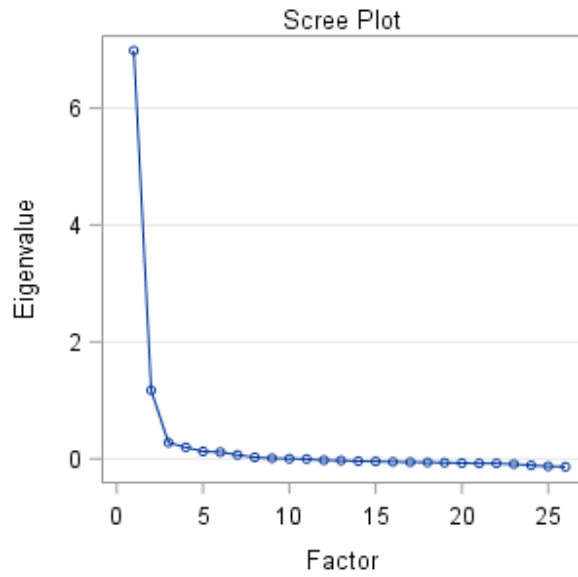


Figure 34. ELA Grade 7 Scree Plot

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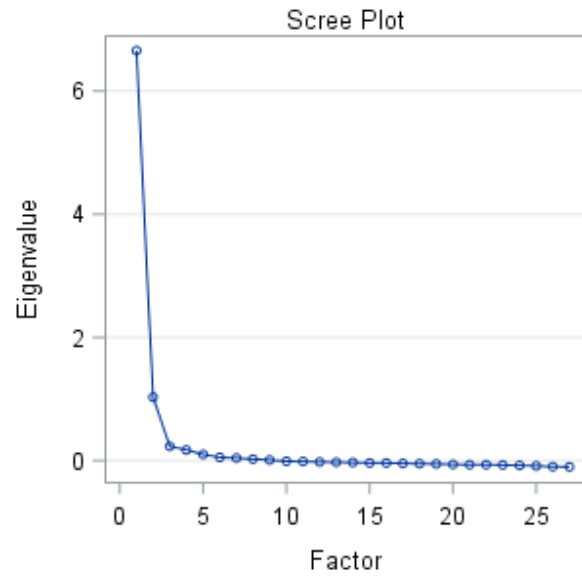


Figure 35. ELA Grade 8 Scree Plot

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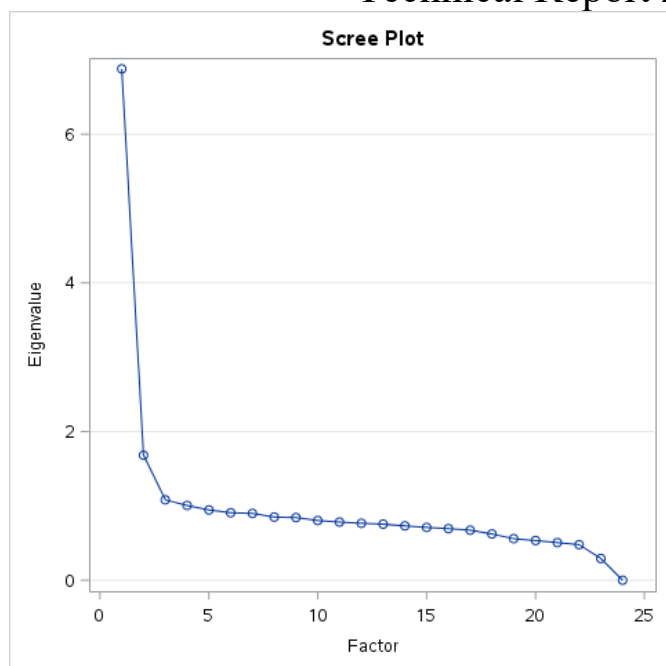


Figure 36. CSLA Grade 3 Scree Plot

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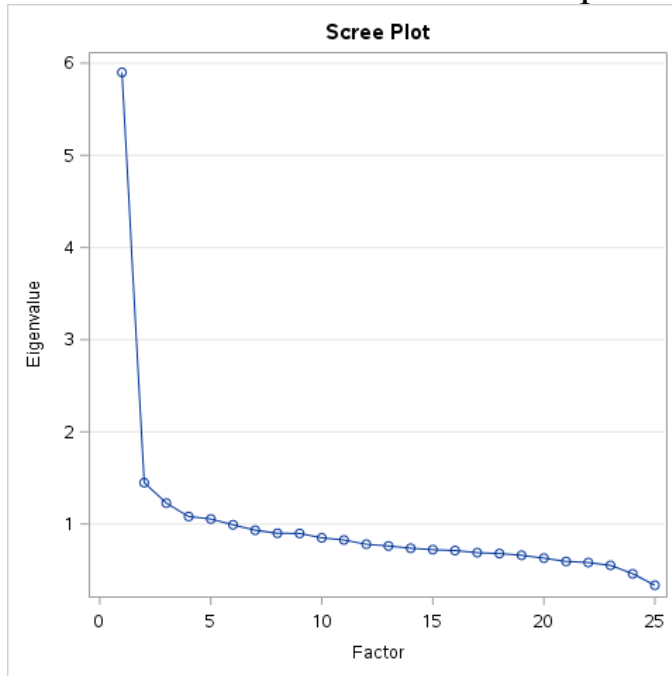


Figure 37. CSLA Grade 4 Scree Plot