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A Cross-validation of easyCBM® Mathematics Cut Scores in Oregon: 2009-2010

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Abstract

In this technical report, we document the results of a cross-validation study designed to identify optimal cut-scores for the use of the easyCBM® mathematics test in Oregon. A large sample, randomly split into two groups of roughly equal size, was used for this study. Students' performance classification on the Oregon state test was used as the criterion. Optimal cut scores were examined for each group. Results indicate quite stable cut scores across groups. Further, the overall area under the ROC curve (AUC) was not statistically different between groups for any measurement occasion at any grade, providing strong evidence of the validity of the cut scores as optimal to predict student performance on the Oregon statewide large-scale assessment.

In this technical report, we present the results of a cross-validation study examining the diagnostic efficiency of easyCBM®. Anderson, Alonzo, and Tindal (2010) used a large sample in Oregon to established optimal cut scores for predicting state test performance classification (not passing/passing). The current study extends the Anderson, Alonzo, and Tindal results by randomly separating the same sample into two groups and examining the optimal cut points on easyCBM® for each group. The stability of the optimal cut points across the randomly selected groups provides evidence to support the specified cut points for predicting state test classification in Oregon.

Theoretical Framework

The development of the easyCBM® math measures began in 2008. By 2009, 33 test forms at each of grades K-8 were fully operational and accompanied the existing reading measures available as part of an online assessment system. The measures were developed specifically for use within a response to intervention (RTI) framework. Within RTI, students are administered benchmark screening assessments periodically throughout the year. From these benchmark assessments, students are classified into tiers of instruction based on normative cut points. For instance, a district using easyCBM® may designate students scoring at or below the 20th percentile to be classified as "at-risk." Students classified as at-risk are then provided with some sort of academic intervention and their progress is monitored with frequent administration of easyCBM® progress monitoring assessments. The easyCBM® system has three designated benchmark screeners, typically administered during the fall, winter, and spring. The 30 remaining forms are designated for monitoring the progress of students receiving an intervention between benchmark administrations.

Although ostensibly low-stakes in nature, perhaps the most critical form among the easyCBM® math forms is the fall benchmark screener. The results from the fall benchmark are used to initially classify students into instructional tiers, from which two types of errors can occur: false positives and false negatives. A false positive occurs when the benchmark screener falsely identifies the student as being at-risk, while a false negative occurs when the screener falsely identifies the student as *not* being at risk. From an instructional standpoint, and within the RTI model, false negatives are of far greater concern than false positives. Students who are not identified as at-risk in the fall are provided only typical grade-level instruction and are not screened again until winter. In other words, when a false negative occurs, the student may be excluded from a potentially valuable intervention for months, unless teacher judgment or a separate measure deems the student at-risk. By contrast, false positives result in providing additional academic services to students who are not necessarily in need. From a resource standpoint, providing additional services to students not in need can be a significant concern. However, students receiving the additional support are also administered additional progress monitoring measures. Thus, students who are not in need of the additional support will likely be identified as such over the course of the progress monitoring administrations.

Given the potential impact of the instructional decisions being made based on performance on the benchmark measures, we feel it is important to carefully scrutinize any potential cut score educators may use with easyCBM® for identifying students as at-risk. However, establishing which students are *truly* at-risk is difficult at best. Simply put, the at-risk designation is nebulous, frequently ill-defined, and often has a different meaning from person to person. For instance, one teacher may determine students to be at-risk if they come from an unstable home environment, regardless of their academic aptitude, influenced perhaps by

research reporting on risk factors associated with different demographics such as participation in a subsidized meal program or low parental education such as Sirin's (2005) meta-analysis of 74 independent samples. At the same time, another teacher may determine students to be at-risk or not purely from an academic standpoint, regardless of other risk factors the students may have in their lives. For the purpose of this study, we use the latter approach, with state test performance serving as the criterion.

We examine raw score cut points on easyCBM® benchmarks and determine how well each predicts performance-level classification on the state test. Anderson, Alonzo, and Tindal (2010) established raw score cut points, and we extend this work by conducting a cross-validation study to explore the stability of the optimal cut scores when the sample is randomly split into two similar groups. Therefore, we examine and report only the diagnostic efficiency information obtained from the receiver operating characteristics (ROC) curve analysis (including the ROC curve figure, area under the curve statistics, and sensitivity and specificity of each cut score), and not other classification statistics such as the positive and negative predictive power, or overall correct classification rate. Readers are referred to Anderson et al.'s (2010) study for this information.

Methods

Setting and Subjects

Three districts participated in this study. The demographics and number of students in the full sample are reported by grade level and district in Table 1. Two of the three participating districts have implemented a district-wide response to intervention (RTI) program. As part of this program, all students, including English language learners and/or students with learning disabilities, are assessed using seasonal easyCBM® benchmark screeners. All students in these

two districts who were present on the day of testing were included in the study. The third district administered the easyCBM® benchmark assessments to a subset of classes selected to match overall district demographics.

Measures

Scores from two assessments were used in this study: the easyCBM® math fall, winter, and spring benchmarks in grades 3-8 and the Oregon Assessment of Knowledge and Skills (OAKS). All easyCBM® forms were written to align to one of three National Council of Teachers of Mathematics (NCTM) Focal Point Standards, displayed in Table 2, and scaled and equated with a 1 PL Rasch model. For full information on the development of the easyCBM® math measures, see Alonzo, Lai, and Tindal (2009a, 2009b), and Lai, Alonzo, and Tindal (2009a, 2009b, 2009c, 2009d). For information on the technical adequacy of easyCBM® math, including analyses on within-year growth estimates; year-end benchmark performance; internal and split-half reliabilities; reliability of the slope estimates; construct, concurrent, and predictive validity analyses; and predictive validity of the slope estimates; see Nese, Lai, Anderson, Jamgochian et al. (2010). For information on the alignment of the items to the NCTM Focal Point standards, see Nese, Lai, Anderson, Park et al. (2010).

The OAKS, Oregon's statewide test used for accountability, is a computer adaptive test. All scores are reported in Rasch Units, a continuous scale ranging from 0 to infinity. According to the Oregon Department of Education (2010), however, most OAKS scores range from 150-300. Results from the OAKS are reported in three performance categories – *Does not meet*, *Meets*, and *Exceeds.* For this study, the passing categories were collapsed into a single *Meets or Exceeds* category. The cut score for *meets* in each of grades 3-8 respectively is: 205, 212, 218, 221, 226, and 230. The Oregon state-testing window was open from October 2009 to May 2010.

Testing regulations for Oregon allow students up to three attempts on the state test, with the students' highest score being retained for accountability purposes. The students' best scores, and subsequent performance classifications, were used for all analyses in the current study.

Data Analyses

We randomly split the sample into two groups using the Bernouilli random value function in SPSS 18.0, by which each case is randomly assigned a value from a Bernouilli distribution based on the specified probability parameter. The probability parameter was set to 0.5, giving each case an equal probability of being in either group. We then conducted a series of *t*-tests with various student subgroups to determine whether the number of students from a particular subgroup differed significantly between the randomly selected groups. In addition, we conducted *t*-tests with each measure used in the study to determine if students' achievement on the easyCBM® measures or classification on OAKS differed significantly between groups. For these *t*-tests, we analyzed comparability of the sample splits based on ten student subgroup categories: seven for ethnicity (American Indian/Alaskan Native, Asian/Pacific Islander, Black, Hispanic, White, Multiethnic, and Decline to Identify) and one for each of Special Education; English Language Learner; and economically disadvantaged students (determined by free or reduced priced lunch eligibility).

When *t*-test results indicated that the randomly selected groups were comparable, we conducted a ROC analysis at each grade for each randomly selected half of the sample. We examined the overall area under the ROC curve (AUC) for comparability between the groups, with respect to a 95% confidence interval. Overlapping confidence intervals indicated a non-significant difference between the randomly selected groups. We then evaluated the sensitivity and specificity of each cut score and chose an optimal cut score for each group, using the same

approach described in the study by Anderson, Alonzo, and Tindal (2010).

These decision rules applied a slightly modified version of the decision rules outlined by Silberglitt and Hintze (2005). Silberglitt and Hintze aimed to maximize both sensitivity and specificity, but placed an increased emphasis on sensitivity. When determining an optimal cut score, they suggest the researcher:

> (a) determine the cut score(s) that yield at least 0.7 for sensitivity and specificity; (b) if possible, increase sensitivity from this point, continuing upward while still maintaining specificity of 0.7, stopping if sensitivity exceeds 0.8; (c) if sensitivity exceeds 0.8 and specificity can still be increased, continue to maximize specificity (while maintaining sensitivity of 0.8); and (d) if both sensitivity and specificity exceed 0.8, repeat steps 2 and 3, using 0.9 as the next cutoff. (p. 316)

We felt that if both sensitivity and specificity could be above 0.8, that cut score would be the best option. However, if no cut score resulted in both sensitivity and specificity being above 0.8, sensitivity was maximized as much as possible while keeping specificity above 0.7, even if a different cut score would have resulted in a both statistics being close to 0.8. These modified rules placed a further emphasis on sensitivity, which we felt was warranted given the importance of reducing of false negatives in an RTI model.

Results

We present results for each of the randomly selected groups in two distinct sections. The first section contains the results of all analyses conducted when the sample was randomly separated into two groups. Results are presented by grade and include (a) frequency tables for each student subgroup, (b) descriptive tables for each measure, and (c) a *t*-test table containing the results from each variable tested. These results appear on pp. 15-47 in the following order:

Section One: Optimal Cut Scores, By Group

For each measure, we report in text the minimal score necessary for students to be classified as "not at-risk," or the optimal meeting score. The tables report cut scores in half-point increments. For instance, a reported value of 26.5 indicates that all students scoring a 26 or below would be classified as at-risk, while those scoring a 27 or above would be classified as not at-risk. In this instance, an optimal meeting score of 27 would be reported in text, given that half point scores are not possible on easyCBM®.

Grade 3 results. For students in Grade 3, the optimal meeting score on the easyCBM® fall benchmark test in mathematics was 27 across both samples. On the winter benchmark test, the optimal meeting score for the two groups was 31 and 32, respectively. On the spring benchmark test, the optimal meeting score calculated for group one was 36 in contrast to 34 for group two.

Grade 4 results. For students in Grade 4, the optimal meeting score on the easyCBM® fall benchmark test in mathematics was 29 across both samples. On the winter benchmark test, the optimal meeting score for the two groups was 29 and 31, respectively. On the spring benchmark test, the optimal meeting score calculated for group one was 32 in contrast to 34 for group two.

Grade 5 results. For students in Grade 5, the optimal meeting score on the easyCBM® fall benchmark test in mathematics was 27 for group one and 28 for group two. On the winter

benchmark test, the optimal meeting score for the two groups was 33 and 30, respectively. On the spring benchmark test, the optimal meeting score calculated for group one was 36 in contrast to 35 for group two.

Grade 6 results. For students in Grade 6, the optimal meeting score on the easyCBM® fall benchmark test in mathematics was 29 for group one and 27 for group two. On the winter and spring benchmark tests, the optimal meeting score for both groups was the same at each testing occasion: 28 and 33, respectively.

Grade 7 results. For students in Grade 7, the optimal meeting score on the easyCBM® mathematics test was 28 across both samples for both fall and winter benchmark tests. On the spring benchmark test, the optimal meeting score for both groups was 27.

Grade 8 results. For students in Grade 8, the optimal meeting score on the easyCBM® fall benchmark test in mathematics was 27 across both samples. On the winter and spring benchmark tests, the optimal meeting score for both groups was 25 and 26, respectively.

Section Two: ROC Analyses, by Group

The second section contains all results from the ROC analyses, including (a) case processing tables, (b) area under the curve statistics, (c) ROC curve figures, and (d) sensitivity and specificity statistics for each cut score. The optimal cut score chosen for each group is displayed in bold-faced font. Once again, we separate the results by the randomly selected groups and present them by grade. These results appear on pp. 48-77 in the following order:

Discussion

The results of the current study suggest that the diagnostic efficiency of easyCBM® is similar across two comparable groups. Using the Bernouilli random value function, the split file resulted in two groups with quite similar demographics. The results of the *t*-test indicated few statistically significant differences between groups in terms of sample demographics or achievement.

For the ROC analyses, the optimal meeting scores for each group were generally within a few points of each other, and in some cases they were identical. It is interesting that, had we not modified the decision rules outlined by Silberglitt and Hintze (2005), the optimal cut points would have been more similar in some cases and less stable in others. For instance, on the grade 3 spring benchmark, there was no cut score with both sensitivity and specificity exceeding 0.8 for Group 1, so sensitivity was maximized as much as possible while keeping specificity above 0.7 – resulting in a meeting score of 36. However, for Group 2 there *was* a cut score that led to both sensitivity and specificity being above 0.8, placing the meeting score at 34. Had we strictly followed the Silberglitt and Hintze rules, the meeting score for Group 1 would have been 35 – only one point different from Group 2, versus the 2-point difference obtained when using the modified rules. It is also worth highlighting that the chosen meeting score of 36 for Group 1 had very high sensitivity for Group 2 (above 0.9) while maintaining specificity above 0.7. However, in other cases, such as in the grade 4 fall benchmark, the modified rules actually resulted in *more* stable optimal cut scores. Overall, we believe that the importance of high sensitivity – and the potential dangers of false negatives – make the modifications to the Silberglitt and Hintze rules worthwhile for establishing optimal cut scores for use within an RTI framework.

Perhaps the most substantial finding from the current study is that in no case did the AUC statistics differ significantly between groups. Thus, the observed differences in optimal cut points can be attributed to sampling or measurement error. The similarities of the curves between groups is clearly evident when examining the ROC figures. It is important that the optimal cut scores for a formative measure not vary dramatically among groups. The findings reported here suggest that, when used within the state of Oregon, easyCBM® optimal cut scores likely only differ slightly between groups of students.

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Table 1

Demographics

Grade	*n*	% ELL	% FRL	% SPED	% Female		% Ethnicity: Amer Ind	Asian/Pac Islander	Black	Hispanic	White	Multi	Decline/ Missing
District 1													
3	1311	4.7	44.3	15.9	52.8	47.2		1.7	4.7	2.4	10.1	73.2	3.1
4	1299	4.4	44.7	17.4	50.7	49.3		1.9	4.4	2.8	11.6	70.1	4.6
5	1357	3.7	43.6	17.4	51.7	48.3		1.8	5.2	2.6	9.9	71.2	3.8
6	1329	4.0	38.1	18.7	47.9	46.9		2.6	4.8	2.6	9.2	67.3	2.9
7	1262	3.0	39.8	15.5	47.5	52.5		1.5	5.9	2.8	10.5	70.6	4.6
8	1298	2.3	38.6	13.7	50.2	49.8		.9	4.7	2.8	10.9	69.0	4.9
District 2													
3	870	1.1	61.8	17.0	51.0	49.0		1.7	2.0	1.4	19.8	67.0	2.2
4	818	-	63.3	19.8	57.5	42.5		2.1	1.8	1.6	17.0	66.5	4.0
5	876	1.4	60.3	19.3	51.8	48.2		2.4	2.1	1.6	16.7	67.9	4.1
6	846	1.5	58.0	16.9	49.6	50.4		2.6	1.4	1.7	14.9	70.7	3.5
7	737	3.0	58.3	15.9	52.5	47.5		2.2	1.6	1.1	18.6	67.8	2.8
8	843	1.9	55.5	15.8	52.1	47.9		1.5	1.4	2.3	16.3	70.6	3.0
District 3													
3	1707	18.7	-	13.1	51.5	48.4		0.0	7.0	1.9	33.7	52.0	1.5
4	1623	15.2	-	12.0	51.6	48.3		0.0	7.7	2.2	34.6	49.7	1.7
5	1618	13.8	-	13.4	52.9	47.0		0.0	8.0	3.1	33.7	49.5	.9
6	1613	11.9	-	13.0	51.5	48.5		0.7	7.1	2.4	34.0	50.7	1.1
7	1643	9.3	-	12.4	51.4	48.5		0.9	6.8	2.3	29.1	55.3	1.3
8	1608	9.1	-	13.2	54.1	45.9		1.0	6.3	2.4	33.3	51.7	1.6

Note. Numbers reflect full sample separated by District. However, during analyses students were excluded listwise and the actual demographics of students included varies by analysis. All values thus more accurately represent the District and not necessarily the analyses, and only provide a general indication of the students included in the analyses.

ELL – English Language Learner, FRL – Free or reduced lunch eligible, SPED – Student receives special education services

Table 2

National Council of Teachers of Mathematics Focal Point Standards

Grade	Focal Point 1	Focal Point 2	Focal Point 3
3	Number and Operations and Algebra	Number and Operations	Geometry
4	Number and Operations and Algebra	Number and Operations	Measurement
5	Number and Operations and Algebra	Number and Operations	Geometry, Measurement, and Algebra
6	Number and Operations	Algebra	Number and Operations and Ratios
7	Number and Operations and Algebra and Geometry	Measurement Geometry and Algebra	Number and Operations and Algebra
8	Algebra	Geometry and Measurement	Data Analysis Number Operations and Algebra

Section 1: Results of the Random Sample Split

Grade 3

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2265	50.0	50.0	50.0
	Group 2	2261	50.0	50.0	100.0
	Total	4526	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	American/Indian	24	1.1	1.1	1.1
		Asian/Pacific Islander	159	7.0	7.2	8.2
		Black	58	2.6	2.6	10.8
		Hispanic	467	20.6	21.0	31.8
		White	1397	61.7	62.8	94.7
		Multiethnic	67	3.0	3.0	97.7
		Decline	51	2.3	2.3	100.0
		Total	2223	98.1	100.0	
	Missing	System	42	1.9		
	Total		2265	100.0		
Group 2	Valid	American/Indian	19	.8	.9	.9
		Asian/Pacific Islander	146	6.5	6.6	7.4
		Black	62	2.7	2.8	10.2
		Hispanic	458	20.3	20.7	30.9
		White	1393	61.6	62.8	93.7
		Multiethnic	93	4.1	4.2	97.9
		Decline	46	2.0	2.1	100.0
		Total	2217	98.1	100.0	
	Missing	System	44	1.9		
	Total		2261	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1898	83.8	85.3	85.3
		Yes	326	14.4	14.7	100.0
		Total	2224	98.2	100.0	
	Missing	System	41	1.8		
	Total		2265	100.0		
Group 2	Valid	No	1874	82.9	84.1	84.1
		Yes	353	15.6	15.9	100.0
		Total	2227	98.5	100.0	
	Missing	System	34	1.5		
	Total		2261	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1185	52.3	52.3	52.3
		Female	1080	47.7	47.7	100.0
		Total	2265	100.0	100.0	
Group 2	Valid	Male	1154	51.0	51.1	51.1
		Female	1105	48.9	48.9	100.0
		Total	2259	99.9	100.0	
	Missing	System	2	.1		
	Total		2261	100.0		

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2053	90.6	90.6	90.6
		Yes	212	9.4	9.4	100.0
		Total	2265	100.0	100.0	
Group 2	Valid	No	2042	90.3	90.3	90.3
		Yes	219	9.7	9.7	100.0
		Total	2261	100.0	100.0	

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	700	30.9	52.3	52.3
		Yes	639	28.2	47.7	100.0
		Total	1339	59.1	100.0	
	Missing	999	47	2.1		
		System	879	38.8		
		Total	926	40.9		
	Total		2265	100.0		
Group 2	Valid	No	717	31.7	51.8	51.8
		Yes	668	29.5	48.2	100.0
		Total	1385	61.3	100.0	
	Missing	999	48	2.1		
		System	828	36.6		
		Total	876	38.7		
	Total		2261	100.0		

Descriptive Statistics

Randomly Selected Groups		N	Minimum	Maximum	Mean	Std. Deviation
Group 1	OAKSMathTot	1854	181	258	211.64	9.914
	Fall09TotMath	1970	11	45	29.83	6.464
	Wint10TotMath	1346	12	45	32.71	6.598
	Spr10TotMath	1843	13	45	36.88	5.812
	Valid N (listwise)	858				
Group 2	OAKSMathTot	1850	175	258	211.54	9.677
	Fall09TotMath	1955	12	45	29.52	6.341
	Wint10TotMath	1373	11	45	32.72	6.490
	Spr10TotMath	1869	14	45	36.75	5.932
	Valid N (listwise)	849				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	2.295	.130	.757	4438	.449	.002	.003	-.004	.008
	Equal variances not assumed			.757	4383.841	.449	.002	.003	-.004	.008
Asian/ PacIslnder	Equal variances assumed	2.232	.135	.747	4438	.455	.006	.008	-.009	.021
	Equal variances not assumed			.747	4432.404	.455	.006	.008	-.009	.021
Black	Equal variances assumed	.593	.441	-.385	4438	.700	-.002	.005	-.011	.008
	Equal variances not assumed			-.385	4432.120	.700	-.002	.005	-.011	.008
Hispanic	Equal variances assumed	.328	.567	.286	4438	.775	.003	.012	-.020	.027
	Equal variances not assumed			.286	4437.947	.775	.003	.012	-.020	.027
White	Equal variances assumed	.000	.989	.007	4438	.994	.000	.015	-.028	.029
	Equal variances not assumed			.007	4437.966	.994	.000	.015	-.028	.029
Multiethnic	Equal variances assumed	17.903	.000	-2.112	4438	.035	-.012	.006	-.023	-.001
	Equal variances not assumed			-2.111	4326.522	.035	-.012	.006	-.023	-.001
Decline	Equal variances assumed	.999	.318	.500	4438	.617	.002	.004	-.006	.011
	Equal variances not assumed			.500	4428.474	.617	.002	.004	-.006	.011
SPED	Equal variances assumed	4.900	.027	-1.106	4449	.269	-.012	.011	-.033	.009
	Equal variances not assumed			-1.106	4444.807	.269	-.012	.011	-.033	.009
Female	Equal variances assumed	2.434	.119	-.830	4522	.407	-.012	.015	-.041	.017
	Equal variances not assumed			-.830	4521.945	.407	-.012	.015	-.041	.017
ELL	Equal variances assumed	.559	.455	-.374	4524	.709	-.003	.009	-.020	.014
	Equal variances not assumed			-.374	4522.679	.709	-.003	.009	-.020	.014

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	.279	.597	-.266	2722	.791	-.005	.019	-.043	.032
	Equal variances not assumed			-.266	2718.968	.791	-.005	.019	-.043	.032
OAKS Math Tot	Equal variances assumed	.157	.692	.300	3702	.764	.096	.322	-.535	.728
	Equal variances not assumed			.300	3700.198	.764	.096	.322	-.535	.728
Fall easyCBM	Equal variances assumed	1.077	.299	1.508	3923	.132	.308	.204	-.093	.709
	Equal variances not assumed			1.508	3922.475	.132	.308	.204	-.093	.709
Wint easyCBM	Equal variances assumed	.496	.481	-.067	2717	.947	-.017	.251	-.509	.475
	Equal variances not assumed			-.067	2713.431	.947	-.017	.251	-.509	.476
Spring easyCBM	Equal variances assumed	2.834	.092	.654	3710	.513	.126	.193	-.252	.504
	Equal variances not assumed			.654	3709.839	.513	.126	.193	-.252	.504
PLC	Equal variances assumed	.865	.352	-.465	3739	.642	-.006	.013	-.031	.019
	Equal variances not assumed			-.465	3738.656	.642	-.006	.013	-.031	.019

Grade 4

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2233	50.6	50.6	50.6
	Group 2	2180	49.4	49.4	100.0
	Total	4413	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	0	1	.0	.0	.0
		American/Indian	23	1.0	1.0	1.1
		Asian/Pacific Islander	152	6.8	6.9	8.0
		Black	67	3.0	3.1	11.1
		Hispanic	420	18.8	19.2	30.2
		White	1380	61.8	63.0	93.2
		Multiethnic	105	4.7	4.8	98.0
		Decline	44	2.0	2.0	100.0
		Total	2192	98.2	100.0	
	Missing	System	41	1.8		
	Total		2233	100.0		
Group 2	Valid	American/Indian	26	1.2	1.2	1.2
		Asian/Pacific Islander	167	7.7	7.9	9.1
		Black	64	2.9	3.0	12.1
		Hispanic	461	21.1	21.7	33.8
		White	1278	58.6	60.1	93.9
		Multiethnic	87	4.0	4.1	98.0
		Decline	43	2.0	2.0	100.0
		Total	2126	97.5	100.0	
	Missing	System	54	2.5		
	Total		2180	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1825	81.7	83.4	83.4
		Yes	362	16.2	16.6	100.0
		Total	2187	97.9	100.0	
	Missing	System	46	2.1		
	Total		2233	100.0		
Group 2	Valid	No	1824	83.7	84.9	84.9
		Yes	325	14.9	15.1	100.0
		Total	2149	98.6	100.0	
	Missing	System	31	1.4		
	Total		2180	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1148	51.4	51.4	51.4
		Female	1085	48.6	48.6	100.0
		Total	2233	100.0	100.0	
Group 2	Valid	Male	1189	54.5	54.6	54.6
		Female	990	45.4	45.4	100.0
		Total	2179	100.0	100.0	
	Missing	System	1	.0		
	Total		2180	100.0		

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2083	93.3	93.3	93.3
		Yes	150	6.7	6.7	100.0
		Total	2233	100.0	100.0	
Group 2	Valid	No	1988	91.2	91.2	91.2
		Yes	191	8.8	8.8	100.0
		Total	2179	100.0	100.0	
	Missing	System	1	.0		
	Total		2180	100.0		

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	0	748	33.5	53.2	53.2
		1	659	29.5	46.8	100.0
		Total	1407	63.0	100.0	
	Missing	999	1	.0		
		System	825	36.9		
		Total	826	37.0		
	Total		2233	100.0		
Group 2	Valid	0	686	31.5	52.4	52.4
		1	622	28.5	47.6	100.0
		Total	1308	60.0	100.0	
	Missing	999	1	.0		
		System	871	40.0		
		Total	872	40.0		
	Total		2180	100.0		

Descriptive Statistics

Randomly Selected Groups		N	Minimum	Maximum	Mean	Std. Deviation
Group 1	OAKSMathTot	1795	179	264	218.71	10.286
	Fall09TotMath	1947	8	45	31.50	7.045
	Wint10TotMath	1408	11	45	32.21	6.569
	Spr10TotMath	1857	10	45	35.43	6.560
	Valid N (listwise)	752				
Group 2	OAKSMathTot	1748	180	263	218.47	9.851
	Fall09TotMath	1881	10	45	31.44	7.150
	Wint10TotMath	1411	12	45	32.22	6.827
	Spr10TotMath	1781	10	45	35.25	6.757
	Valid N (listwise)	748				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	1.154	0.283	-0.537	4315	0.591	-0.002	0.003	-0.008	0.005
	Equal variances not assumed			-0.536	4267.611	0.592	-0.002	0.003	-0.008	0.005
Asian/ PacIslnder	Equal variances assumed	5.314	0.021	-1.152	4315	0.249	-0.009	0.008	-0.025	0.006
	Equal variances not assumed			-1.151	4282.457	0.25	-0.009	0.008	-0.025	0.006
Black	Equal variances assumed	0.033	0.855	0.091	4315	0.927	0	0.005	-0.01	0.011
	Equal variances not assumed			0.091	4312.811	0.927	0	0.005	-0.01	0.011
Hispanic	Equal variances assumed	16.824	0	-2.05	4315	0.04	-0.025	0.012	-0.049	-0.001
	Equal variances not assumed			-2.049	4290.291	0.041	-0.025	0.012	-0.049	-0.001
White	Equal variances assumed	14.82	0	1.94	4315	0.052	0.029	0.015	0	0.058
	Equal variances not assumed			1.939	4306.604	0.053	0.029	0.015	0	0.058
Multiethnic	Equal variances assumed	4.984	0.026	1.116	4315	0.265	0.007	0.006	-0.005	0.019
	Equal variances not assumed			1.117	4306.238	0.264	0.007	0.006	-0.005	0.019
Decline	Equal variances assumed	0.005	0.946	-0.034	4315	0.973	0	0.004	-0.009	0.008
	Equal variances not assumed			-0.034	4310.128	0.973	0	0.004	-0.009	0.008
SPED	Equal variances assumed	6.65	0.01	1.288	4334	0.198	0.014	0.011	-0.007	0.036
	Equal variances not assumed			1.289	4332.417	0.198	0.014	0.011	-0.007	0.036
Female	Equal variances assumed	13.982	0	2.1	4410	0.036	0.032	0.015	0.002	0.061
	Equal variances not assumed			2.1	4408.111	0.036	0.032	0.015	0.002	0.061
ELL	Equal variances assumed	26.096	0	-2.548	4410	0.011	-0.02	0.008	-0.036	-0.005
	Equal variances not assumed			-2.544	4318.377	0.011	-0.02	0.008	-0.036	-0.005

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	0.544	0.461	-0.373	2713	0.709	-0.007	0.019	-0.045	0.03
	Equal variances not assumed			-0.373	2698.29	0.709	-0.007	0.019	-0.045	0.03
OAKS Math Tot	Equal variances assumed	2.808	0.094	0.696	3541	0.487	0.236	0.339	-0.428	0.899
	Equal variances not assumed			0.696	3540.022	0.486	0.236	0.338	-0.428	0.899
Fall easyCBM	Equal variances assumed	0.224	0.636	0.262	3826	0.793	0.06	0.229	-0.39	0.51
	Equal variances not assumed			0.262	3816.686	0.793	0.06	0.23	-0.39	0.51
Wint easyCBM	Equal variances assumed	3.11	0.078	-0.071	2817	0.943	-0.018	0.252	-0.513	0.477
	Equal variances not assumed			-0.071	2813.293	0.943	-0.018	0.252	-0.513	0.477
Spring easyCBM	Equal variances assumed	0.815	0.367	0.837	3636	0.403	0.185	0.221	-0.248	0.618
	Equal variances not assumed			0.836	3617.601	0.403	0.185	0.221	-0.248	0.618
PLC	Equal variances assumed	0.057	0.811	0.12	4263	0.905	0.001	0.011	-0.021	0.023
	Equal variances not assumed			0.12	4260.036	0.905	0.001	0.011	-0.021	0.023

Grade 5

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2255	50.2	50.2	50.2
	Group 2	2234	49.8	49.8	100.0
	Total	4489	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	American/Indian	28	1.2	1.3	1.3
		Asian/Pacific Islander	163	7.2	7.4	8.6
		Black	77	3.4	3.5	12.1
		Hispanic	435	19.3	19.7	31.8
		White	1387	61.5	62.7	94.5
		Multiethnic	69	3.1	3.1	97.6
		Decline	52	2.3	2.4	100.0
		Total	2211	98.0	100.0	
	Missing	System	44	2.0		
	Total		2255	100.0		
Group 2	Valid	American/Indian	26	1.2	1.2	1.2
		Asian/Pacific Islander	155	6.9	7.1	8.3
		Black	72	3.2	3.3	11.6
		Hispanic	438	19.6	20.1	31.7
		White	1384	62.0	63.5	95.1
		Multiethnic	57	2.6	2.6	97.8
		Decline	49	2.2	2.2	100.0
		Total	2181	97.6	100.0	
	Missing	System	53	2.4		
	Total		2234	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1882	83.5	84.2	84.2
		Yes	354	15.7	15.8	100.0
		Total	2236	99.2	100.0	
	Missing	System	19	.8		
	Total		2255	100.0		
Group 2	Valid	No	1863	83.4	84.0	84.0
		Yes	356	15.9	16.0	100.0
		Total	2219	99.3	100.0	
	Missing	System	15	.7		
	Total		2234	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1197	53.1	53.1	53.1
		Female	1056	46.8	46.9	100.0
		Total	2253	99.9	100.0	
	Missing	System	2	.1		
	Total		2255	100.0		
Group 2	Valid	Male	1162	52.0	52.0	52.0
		Female	1072	48.0	48.0	100.0
		Total	2234	100.0	100.0	

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2102	93.2	93.2	93.2
		Yes	153	6.8	6.8	100.0
		Total	2255	100.0	100.0	
Group 2	Valid	No	2069	92.6	92.6	92.6
		Yes	165	7.4	7.4	100.0
		Total	2234	100.0	100.0	

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	0	739	32.8	52.3	52.3
		1	675	29.9	47.7	100.0
		Total	1414	62.7	100.0	
	Missing	999	1	.0		
		System	840	37.3		
		Total	841	37.3		
	Total		2255	100.0		
Group 2	Valid	0	752	33.7	54.7	54.7
		1	623	27.9	45.3	100.0
		Total	1375	61.5	100.0	
	Missing	999	1	.0		
		System	858	38.4		
		Total	859	38.5		
	Total		2234	100.0		

Descriptive Statistics

Randomly Selected Groups		N	Minimum	Maximum	Mean	Std. Deviation
Group 1	OAKS Best Math Score	1847	191	266	225.05	9.893
	Fall09TotMath	2036	12	45	30.83	7.084
	Wint10TotMath	1457	12	45	33.36	7.481
	Spr10TotMath	1926	7	45	37.83	6.945
	Valid N (listwise)	890				
Group 2	OAKS Best Math Score	1825	188	267	224.72	9.610
	Fall09TotMath	1990	11	45	30.68	7.040
	Wint10TotMath	1472	12	45	33.17	7.367
	Spr10TotMath	1878	10	45	37.49	7.141
	Valid N (listwise)	890				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	.199	.655	.223	4390	.823	.001	.003	-.006	.007
	Equal variances not assumed			.223	4388.852	.823	.001	.003	-.006	.007
Asian/ PacIslnder	Equal variances assumed	.460	.497	.339	4390	.734	.003	.008	-.013	.018
	Equal variances not assumed			.339	4389.954	.734	.003	.008	-.013	.018
Black	Equal variances assumed	.441	.507	.332	4390	.740	.002	.005	-.009	.013
	Equal variances not assumed			.332	4389.354	.740	.002	.005	-.009	.013
Hispanic	Equal variances assumed	.459	.498	-.339	4390	.735	-.004	.012	-.028	.020
	Equal variances not assumed			-.339	4387.993	.735	-.004	.012	-.028	.020
White	Equal variances assumed	.992	.319	-.498	4390	.619	-.007	.015	-.036	.021
	Equal variances not assumed			-.498	4389.596	.619	-.007	.015	-.036	.021
Multiethnic	Equal variances assumed	4.059	.044	1.007	4390	.314	.005	.005	-.005	.015
	Equal variances not assumed			1.007	4367.200	.314	.005	.005	-.005	.015
Decline	Equal variances assumed	.216	.642	.233	4390	.816	.001	.005	-.008	.010
	Equal variances not assumed			.233	4389.670	.816	.001	.005	-.008	.010
SPED	Equal variances assumed	.149	.700	-.193	4453	.847	-.002	.011	-.024	.019
	Equal variances not assumed			-.193	4452.246	.847	-.002	.011	-.024	.019
Female	Equal variances assumed	2.133	.144	-.748	4485	.455	-.011	.015	-.040	.018
	Equal variances not assumed			-.748	4484.585	.455	-.011	.015	-.040	.018
ELL	Equal variances assumed	2.463	.117	-.785	4487	.433	-.006	.008	-.021	.009
	Equal variances not assumed			-.784	4476.457	.433	-.006	.008	-.021	.009

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	5.952	.015	1.285	2787	.199	.024	.019	-.013	.061
	Equal variances not assumed			1.285	2785.315	.199	.024	.019	-.013	.061
OAKS Math Tot	Equal variances assumed	.012	.911	1.023	3670	.306	.329	.322	-.302	.960
	Equal variances not assumed			1.023	3668.935	.306	.329	.322	-.302	.960
Fall easyCBM	Equal variances assumed	.111	.739	.670	4024	.503	.149	.223	-.287	.586
	Equal variances not assumed			.670	4022.903	.503	.149	.223	-.287	.586
Wint easyCBM	Equal variances assumed	.144	.705	.677	2927	.498	.186	.274	-.352	.724
	Equal variances not assumed			.677	2925.089	.499	.186	.274	-.352	.724
Spring easyCBM	Equal variances assumed	3.725	.054	1.513	3802	.130	.346	.228	-.102	.793
	Equal variances not assumed			1.513	3791.343	.130	.346	.228	-.102	.794
PLC	Equal variances assumed	5.222	.022	1.142	4341	.253	.013	.011	-.009	.035
	Equal variances not assumed			1.142	4334.211	.253	.013	.011	-.009	.035

Grade 6

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2224	49.9	49.9	49.9
	Group 2	2231	50.1	50.1	100.0
	Total	4455	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	American/Indian	40	1.8	1.9	1.9
		Asian/Pacific Islander	145	6.5	6.8	8.6
		Black	72	3.2	3.4	12.0
		Hispanic	439	19.7	20.5	32.4
		White	1350	60.7	62.9	95.3
		Multiethnic	50	2.2	2.3	97.7
		Decline	50	2.2	2.3	100.0
		Total	2146	96.5	100.0	
	Missing	System	78	3.5		
	Total		2224	100.0		
Group 2	Valid	American/Indian	38	1.7	1.8	1.8
		Asian/Pacific Islander	159	7.1	7.4	9.2
		Black	76	3.4	3.5	12.7
		Hispanic	413	18.5	19.2	31.9
		White	1368	61.3	63.7	95.6
		Multiethnic	54	2.4	2.5	98.1
		Decline	41	1.8	1.9	100.0
		Total	2149	96.3	100.0	
	Missing	System	82	3.7		
	Total		2231	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1866	83.9	85.5	85.5
		Yes	316	14.2	14.5	100.0
		Total	2182	98.1	100.0	
	Missing	System	42	1.9		
	Total		2224	100.0		
Group 2	Valid	No	1821	81.6	83.0	83.0
		Yes	372	16.7	17.0	100.0
		Total	2193	98.3	100.0	
	Missing	System	38	1.7		
	Total		2231	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1138	51.2	51.8	51.8
		Female	1059	47.6	48.2	100.0
		Total	2197	98.8	100.0	
	Missing	System	27	1.2		
	Total		2224	100.0		
Group 2	Valid	Male	1079	48.4	49.3	49.3
		Female	1109	49.7	50.7	100.0
		Total	2188	98.1	100.0	
	Missing	System	43	1.9		
	Total		2231	100.0		

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2088	93.9	93.9	93.9
		Yes	136	6.1	6.1	100.0
		Total	2224	100.0	100.0	
Group 2	Valid	No	2078	93.1	93.2	93.2
		Yes	152	6.8	6.8	100.0
		Total	2230	100.0	100.0	
	Missing	System	1	.0		
	Total		2231	100.0		

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	749	33.7	55.9	55.9
		Yes	590	26.5	44.1	100.0
		Total	1339	60.2	100.0	
	Missing	999	4	.2		
		System	881	39.6		
		Total	885	39.8		
	Total		2224	100.0		
Group 2	Valid	No	759	34.0	56.4	56.4
		Yes	587	26.3	43.6	100.0
		Total	1346	60.3	100.0	
	Missing	999	1	.0		
		System	884	39.6		
		Total	885	39.7		
	Total		2231	100.0		

Descriptive Statistics

Randomly Selected Groups		N	Minimum	Maximum	Mean	Std. Deviation
Group 1	OAKSMathTot	1753	196	277	227.40	9.794
	Fall09TotMath	1971	10	45	30.46	7.224
	Wint10TotMath	1274	8	45	30.69	7.603
	Spr10TotMath	1364	9	45	34.14	8.059
	Valid N (listwise)	627				
Group 2	OAKSMathTot	1767	195	267	226.89	9.764
	Fall09TotMath	1986	9	45	29.92	7.285
	Wint10TotMath	1284	10	45	30.73	7.654
	Spr10TotMath	1375	8	45	34.44	8.052
	Valid N (listwise)	653				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	.220	.639	.235	4293	.814	.001	.004	-.007	.009
	Equal variances not assumed			.235	4289.815	.814	.001	.004	-.007	.009
Asian/ PacIslnder	Equal variances assumed	2.693	.101	-.820	4293	.412	-.006	.008	-.022	.009
	Equal variances not assumed			-.820	4285.966	.412	-.006	.008	-.022	.009
Black	Equal variances assumed	.425	.515	-.326	4293	.745	-.002	.006	-.013	.009
	Equal variances not assumed			-.326	4290.530	.745	-.002	.006	-.013	.009
Hispanic	Equal variances assumed	4.144	.042	1.018	4293	.309	.012	.012	-.011	.036
	Equal variances not assumed			1.018	4290.342	.309	.012	.012	-.011	.036
White	Equal variances assumed	1.038	.308	-.510	4293	.610	-.007	.015	-.036	.021
	Equal variances not assumed			-.510	4292.861	.610	-.007	.015	-.036	.021
Multiethnic	Equal variances assumed	.608	.436	-.390	4293	.697	-.002	.005	-.011	.007
	Equal variances not assumed			-.390	4287.617	.697	-.002	.005	-.011	.007
Decline	Equal variances assumed	3.691	.055	.960	4293	.337	.004	.004	-.004	.013
	Equal variances not assumed			.960	4251.459	.337	.004	.004	-.004	.013
SPED	Equal variances assumed	20.405	.000	-2.255	4373	.024	-.025	.011	-.046	-.003
	Equal variances not assumed			-2.255	4357.711	.024	-.025	.011	-.046	-.003
Female	Equal variances assumed	1.806	.179	-1.645	4383	.100	-.025	.015	-.054	.005
	Equal variances not assumed			-1.645	4382.905	.100	-.025	.015	-.054	.005
ELL	Equal variances assumed	3.621	.057	-.951	4452	.342	-.007	.007	-.021	.007
	Equal variances not assumed			-.951	4441.858	.342	-.007	.007	-.021	.007

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	.222	.637	.236	2683	.813	.005	.019	-.033	.042
	Equal variances not assumed			.236	2682.892	.813	.005	.019	-.033	.042
OAKS Math Tot	Equal variances assumed	.010	.922	1.543	3518	.123	.509	.330	-.138	1.155
	Equal variances not assumed			1.543	3517.571	.123	.509	.330	-.138	1.155
Fall easyCBM	Equal variances assumed	.047	.829	2.333	3955	.020	.538	.231	.086	.990
	Equal variances not assumed			2.334	3954.997	.020	.538	.231	.086	.990
Wint easyCBM	Equal variances assumed	.013	.911	-.135	2556	.893	-.041	.302	-.632	.551
	Equal variances not assumed			-.135	2555.997	.893	-.041	.302	-.632	.551
Spring easyCBM	Equal variances assumed	.069	.793	-.955	2737	.339	-.294	.308	-.898	.309
	Equal variances not assumed			-.955	2736.780	.339	-.294	.308	-.898	.309
PLC	Equal variances assumed	5.574	.018	1.180	4191	.238	.015	.013	-.010	.041
	Equal variances not assumed			1.180	4189.393	.238	.015	.013	-.010	.041

Grade 7

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2146	50.3	50.3	50.3
	Group 2	2119	49.7	49.7	100.0
	Total	4265	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	American Indian/Alaskan Native	32	1.5	1.5	1.5
		Asian/Pacific Islander	163	7.6	7.7	9.2
		Black	74	3.4	3.5	12.7
		Hispanic	423	19.7	20.0	32.7
		White	1304	60.8	61.5	94.2
		Multi-Ethnic	69	3.2	3.3	97.5
		Decline/Missing	54	2.5	2.5	100.0
		Total	2119	98.7	100.0	
	Missing	System	27	1.3		
	Total		2146	100.0		
Group 2	Valid	American Indian/Alaskan Native	20	.9	1.0	1.0
		Asian/Pacific Islander	155	7.3	7.5	8.4
		Black	57	2.7	2.7	11.2
		Hispanic	371	17.5	17.9	29.0
		White	1374	64.8	66.2	95.2
		Multi-Ethnic	54	2.5	2.6	97.8
		Decline/Missing	46	2.2	2.2	100.0
		Total	2077	98.0	100.0	
	Missing	System	42	2.0		
	Total		2119	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1810	84.3	85.7	85.7
		Yes	303	14.1	14.3	100.0
		Total	2113	98.5	100.0	
	Missing	System	33	1.5		
	Total		2146	100.0		
Group 2	Valid	No	1801	85.0	86.6	86.6
		Yes	278	13.1	13.4	100.0
		Total	2079	98.1	100.0	
	Missing	System	40	1.9		
	Total		2119	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1089	50.7	50.7	50.7
		Female	1057	49.3	49.3	100.0
		Total	2146	100.0	100.0	
Group 2	Valid	Male	1060	50.0	50.1	50.1
		Female	1057	49.9	49.9	100.0
		Total	2117	99.9	100.0	
	Missing	System	2	.1		
	Total		2119	100.0		

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2016	93.9	94.0	94.0
		Yes	129	6.0	6.0	100.0
		Total	2145	100.0	100.0	
	Missing	System	1	.0		
	Total		2146	100.0		
Group 2	Valid	No	2001	94.4	94.5	94.5
		Yes	117	5.5	5.5	100.0
		Total	2118	100.0	100.0	
	Missing	System	1	.0		
	Total		2119	100.0		

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	740	34.5	57.1	57.1
		Yes	555	25.9	42.9	100.0
		Total	1295	60.3	100.0	
	Missing	999	2	.1		
		System	849	39.6		
		Total	851	39.7		
	Total		2146	100.0		
Group 2	Valid	No	723	34.1	57.5	57.5
		Yes	535	25.2	42.5	100.0
		Total	1258	59.4	100.0	
	Missing	999	1	.0		
		System	860	40.6		
		Total	861	40.6		
	Total		2119	100.0		

Descriptive Statistics

Randomly Selected Groups		N	Minimum	Maximum	Mean	Std. Deviation
Group 1	OAKS Best Math Score	1742	203	270	232.87	9.539
	Fall09TotMath	1823	7	45	29.50	8.094
	Wint10TotMath	1124	8	45	29.04	8.032
	Spr10TotMath	1216	9	45	31.14	8.308
	Valid N (listwise)	644				
Group 2	OAKS Best Math Score	1729	201	275	233.38	9.810
	Fall09TotMath	1843	7	45	29.68	8.303
	Wint10TotMath	1123	7	45	29.62	8.347
	Spr10TotMath	1199	8	45	31.61	8.460
	Valid N (listwise)	693				

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	10.292	.001	1.602	4194	.109	.005	.003	-.001	.012
	Equal variances not assumed			1.606	4034.126	.108	.005	.003	-.001	.012
Asian/ PacIslnder	Equal variances assumed	.316	.574	.281	4194	.779	.002	.008	-.014	.018
	Equal variances not assumed			.281	4193.843	.779	.002	.008	-.014	.018
Black	Equal variances assumed	7.774	.005	1.393	4194	.164	.007	.005	-.003	.018
	Equal variances not assumed			1.394	4155.534	.163	.007	.005	-.003	.018
Hispanic	Equal variances assumed	12.091	.001	1.737	4194	.083	.021	.012	-.003	.045
	Equal variances not assumed			1.737	4191.862	.082	.021	.012	-.003	.045
White	Equal variances assumed	38.186	.000	-3.113	4194	.002	-.046	.015	-.075	-.017
	Equal variances not assumed			-3.114	4193.750	.002	-.046	.015	-.075	-.017
Multiethnic	Equal variances assumed	6.362	.012	1.260	4194	.208	.007	.005	-.004	.017
	Equal variances not assumed			1.261	4161.171	.207	.007	.005	-.004	.017
Decline	Equal variances assumed	2.008	.157	.708	4194	.479	.003	.005	-.006	.013
	Equal variances not assumed			.709	4184.215	.478	.003	.005	-.006	.013
SPED	Equal variances assumed	3.292	.070	.907	4190	.365	.010	.011	-.011	.031
	Equal variances not assumed			.907	4189.282	.364	.010	.011	-.011	.031
Female	Equal variances assumed	.458	.499	-.440	4261	.660	-.007	.015	-.037	.023
	Equal variances not assumed			-.440	4260.198	.660	-.007	.015	-.037	.023
ELL	Equal variances assumed	1.882	.170	.686	4261	.493	.005	.007	-.009	.019
	Equal variances not assumed			.686	4257.850	.493	.005	.007	-.009	.019

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	.113	.737	.168	2551	.867	.003	.020	-.035	.042
	Equal variances not assumed			.168	2548.998	.867	.003	.020	-.035	.042
OAKS Math Tot	Equal variances assumed	.833	.361	-1.568	3469	.117	-.515	.328	-1.159	.129
	Equal variances not assumed			-1.568	3464.646	.117	-.515	.328	-1.159	.129
Fall easyCBM	Equal variances assumed	.822	.365	-.671	3664	.502	-.182	.271	-.713	.349
	Equal variances not assumed			-.671	3663.219	.502	-.182	.271	-.713	.349
Wint easyCBM	Equal variances assumed	2.638	.104	-1.693	2245	.091	-.585	.346	-1.263	.093
	Equal variances not assumed			-1.693	2241.521	.091	-.585	.346	-1.263	.093
Spring easyCBM	Equal variances assumed	1.200	.273	-1.375	2413	.169	-.469	.341	-1.138	.200
	Equal variances not assumed			-1.375	2410.488	.169	-.469	.341	-1.138	.200
PLC	Equal variances assumed	8.592	.003	-1.464	4093	.143	-.018	.013	-.043	.006
	Equal variances not assumed			-1.465	4092.670	.143	-.018	.013	-.043	.006

Grade 8

Randomly Selected Groups

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Group 1	2243	50.9	50.9	50.9
	Group 2	2167	49.1	49.1	100.0
	Total	4410	100.0	100.0	

EthnicCd

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	American/Indian	27	1.2	1.2	1.2
		Asian/Pacific Islander	147	6.6	6.7	7.9
		Black	73	3.3	3.3	11.2
		Hispanic	422	18.8	19.1	30.3
		White	1417	63.2	64.1	94.4
		Multiethnic	65	2.9	2.9	97.4
		Decline/Missing	58	2.6	2.6	100.0
		Total	2209	98.5	100.0	
	Missing	System	34	1.5		
	Total		2243	100.0		
Group 2	Valid	American/Indian	23	1.1	1.1	1.1
		Asian/Pacific Islander	152	7.0	7.1	8.2
		Black	73	3.4	3.4	11.6
		Hispanic	443	20.4	20.7	32.4
		White	1315	60.7	61.6	94.0
		Multiethnic	63	2.9	3.0	96.9
		Decline/Missing	66	3.0	3.1	100.0
		Total	2135	98.5	100.0	
	Missing	System	32	1.5		
	Total		2167	100.0		

SPED

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	1908	85.1	86.6	86.6
		Yes	295	13.2	13.4	100.0
		Total	2203	98.2	100.0	
	Missing	System	40	1.8		
	Total		2243	100.0		
Group 2	Valid	No	1836	84.7	86.0	86.0
		Yes	300	13.8	14.0	100.0
		Total	2136	98.6	100.0	
	Missing	System	31	1.4		
	Total		2167	100.0		

Female

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	Male	1181	52.7	52.7	52.7
		Female	1062	47.3	47.3	100.0
		Total	2243	100.0	100.0	
Group 2	Valid	Male	1112	51.3	51.3	51.3
		Female	1055	48.7	48.7	100.0
		Total	2167	100.0	100.0	

ELL

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	2129	94.9	94.9	94.9
		Yes	114	5.1	5.1	100.0
		Total	2243	100.0	100.0	
Group 2	Valid	No	2056	94.9	94.9	94.9
		Yes	111	5.1	5.1	100.0
		Total	2167	100.0	100.0	

EconDsvntg

Randomly Selected Groups			Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	Valid	No	844	37.6	59.2	59.2
		Yes	582	25.9	40.8	100.0
		Total	1426	63.6	100.0	
	Missing	System	817	36.4		
	Total		2243	100.0		
Group 2	Valid	No	749	34.6	57.3	57.3
		Yes	558	25.7	42.7	100.0
		Total	1307	60.3	100.0	
	Missing	System	860	39.7		
	Total		2167	100.0		

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AmerInd/ AkNative	Equal variances assumed	.802	.370	.448	4342	.654	.001	.003	-.005	.008
	Equal variances not assumed			.448	4338.529	.654	.001	.003	-.005	.008
Asian/ PacIslnder	Equal variances assumed	1.464	.226	-.605	4342	.545	-.005	.008	-.020	.010
	Equal variances not assumed			-.605	4323.551	.546	-.005	.008	-.020	.010
Black	Equal variances assumed	.175	.675	-.209	4342	.834	-.001	.005	-.012	.010
	Equal variances not assumed			-.209	4330.944	.834	-.001	.005	-.012	.010
Hispanic	Equal variances assumed	7.375	.007	-1.358	4342	.175	-.016	.012	-.040	.007
	Equal variances not assumed			-1.357	4323.675	.175	-.016	.012	-.040	.007
White	Equal variances assumed	12.017	.001	1.742	4342	.082	.026	.015	-.003	.054
	Equal variances not assumed			1.742	4331.946	.082	.026	.015	-.003	.054
Multiethnic	Equal variances assumed	.001	.974	-.016	4342	.987	.000	.005	-.010	.010
	Equal variances not assumed			-.016	4336.548	.987	.000	.005	-.010	.010
Decline	Equal variances assumed	3.398	.065	-.921	4342	.357	-.005	.005	-.015	.005
	Equal variances not assumed			-.920	4287.206	.358	-.005	.005	-.015	.005
SPED	Equal variances assumed	1.568	.211	-.626	4337	.531	-.007	.010	-.027	.014
	Equal variances not assumed			-.626	4325.773	.531	-.007	.010	-.027	.014
Female	Equal variances assumed	2.809	.094	-.889	4408	.374	-.013	.015	-.043	.016
	Equal variances not assumed			-.889	4402.436	.374	-.013	.015	-.043	.016
ELL	Equal variances assumed	.014	.904	-.060	4408	.952	.000	.007	-.013	.013
	Equal variances not assumed			-.060	4401.584	.952	.000	.007	-.013	.013

Independent Samples Test (continued)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
EconDsvntg	Equal variances assumed	3.880	.049	-.995	2731	.320	-.019	.019	-.056	.018
	Equal variances not assumed			-.995	2707.282	.320	-.019	.019	-.056	.018
OAKS Math Tot	Equal variances assumed	.453	.501	1.699	3576	.089	.624	.367	-.096	1.343
	Equal variances not assumed			1.699	3569.442	.089	.624	.367	-.096	1.343
Fall easyCBM	Equal variances assumed	.134	.714	1.122	3670	.262	.306	.273	-.229	.841
	Equal variances not assumed			1.122	3666.249	.262	.306	.273	-.229	.841
Wint easyCBM	Equal variances assumed	.004	.952	.472	2208	.637	.178	.377	-.561	.918
	Equal variances not assumed			.472	2207.607	.637	.178	.377	-.561	.918
Spring easyCBM	Equal variances assumed	.175	.676	.355	2296	.723	.126	.355	-.569	.821
	Equal variances not assumed			.355	2293.754	.723	.126	.354	-.569	.821
PLC	Equal variances assumed	1.034	.309	.508	4237	.611	.006	.012	-.017	.029
	Equal variances not assumed			.508	4226.006	.611	.006	.012	-.017	.029

Section 2: ROC Analyses

Grade 3

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	703
	Negative	157
	Missing	1405
Group 2	Positive[a]	697
	Negative	156
	Missing	1408

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

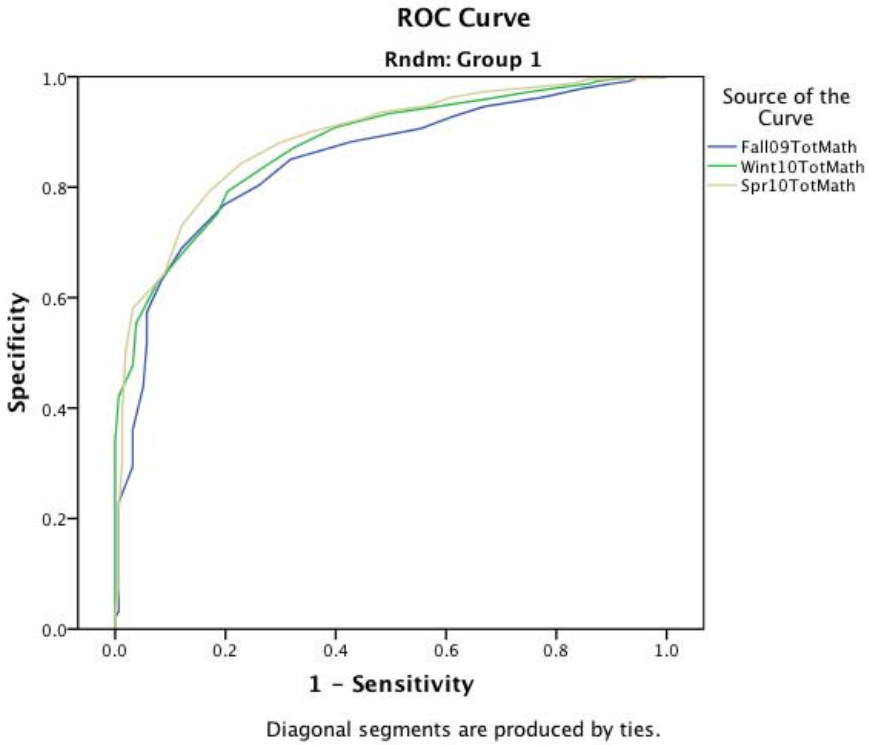
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.848	.016	.000	.817	.879
	Wint10TotMath	.874	.013	.000	.848	.901
	Spr10TotMath	.886	.013	.000	.860	.913
Group 2	Fall09TotMath	.871	.013	.000	.845	.898
	Wint10TotMath	.851	.016	.000	.820	.882
	Spr10TotMath	.899	.012	.000	.875	.923

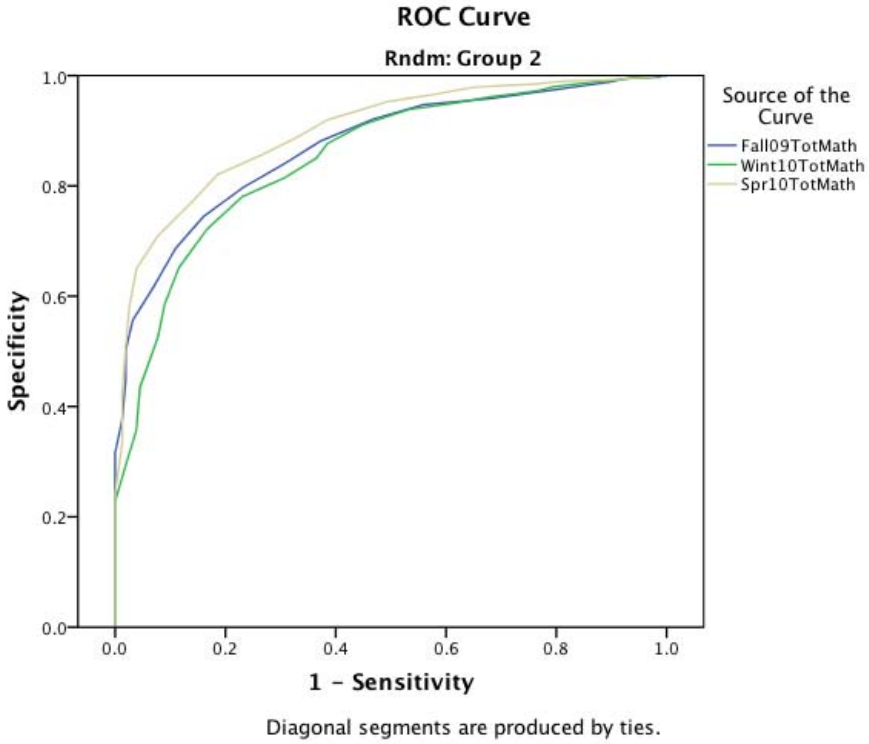
a. Under the nonparametric assumption

b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Rndm: Group 1
Source of the Curve
Fall09TotMath
Wint10TotMath
Spr10TotMath
Specificity
1 – Sensitivity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Rndm: Group 2
Source of the Curve
Fall09TotMath
Wint10TotMath
Spr10TotMath
Specificity
1 – Sensitivity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

Grade 3
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
10	0	1	-	-
11	-	-	0	1
12	0.013	1	-	-
12.5	-	-	0.006	1
13.5	0.032	1	0.013	1
14.5	0.057	1	0.013	0.997
15.5	0.057	0.996	0.058	0.997
16.5	0.07	0.991	0.077	0.994
17.5	0.102	0.987	0.103	0.989
18.5	0.153	0.979	0.154	0.981
19.5	0.223	0.963	0.205	0.974
20.5	0.331	0.946	0.321	0.958
21.5	0.389	0.927	0.442	0.947
22.5	0.446	0.906	0.532	0.921
23.5	0.573	0.882	0.628	0.881
24.5	0.682	0.851	0.692	0.841
25.5	0.739	0.804	0.769	0.796
26.5	**0.803**	**0.768**	**0.84**	**0.745**
27.5	0.879	0.69	0.891	0.686
28.5	0.917	0.629	0.929	0.618
29.5	0.943	0.573	0.968	0.557
30.5	0.943	0.518	0.981	0.504
31.5	0.949	0.44	0.981	0.449
32.5	0.968	0.361	0.987	0.377
33.5	0.968	0.294	1	0.317
34.5	0.994	0.229	1	0.237
35.5	0.994	0.171	1	0.194
36.5	0.994	0.137	1	0.164
37.5	0.994	0.098	1	0.121
38.5	0.994	0.065	1	0.082
39.5	0.994	0.031	1	0.059
40.5	1	0.021	1	0.034
41.5	1	0.013	1	0.029
42.5	1	0.01	1	0.013
43.5	1	0.003	-	-
44	-	-	1	0.001
44.5	1	0.001	-	-
46	1	0	1	0

Grade 3
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
11	0	1	-	-
12.5	0.006	1	-	-
13	-	-	0	1
14	0.013	1	-	-
14.5	-	-	0.013	1
15.5	0.025	1	0.026	0.999
16.5	0.038	1	0.032	0.996
17.5	0.07	0.999	0.045	0.996
18.5	0.096	0.996	0.058	0.996
19.5	0.127	0.991	0.083	0.993
20.5	0.14	0.987	0.128	0.989
21.5	0.197	0.98	0.205	0.98
22.5	0.255	0.972	0.231	0.973
23.5	0.331	0.959	0.321	0.961
24.5	0.408	0.947	0.378	0.951
25.5	0.503	0.933	0.468	0.938
26.5	0.599	0.909	0.551	0.911
27.5	0.675	0.872	0.615	0.877
28.5	0.726	0.839	0.635	0.851
29.5	0.796	0.792	0.692	0.815
30.5	**0.815**	**0.751**	0.769	0.78
31.5	0.866	0.694	**0.833**	**0.722**
32.5	0.924	0.627	0.885	0.651
33.5	0.962	0.553	0.91	0.585
34.5	0.968	0.477	0.923	0.524
35.5	0.994	0.421	0.955	0.435
36.5	1	0.34	0.962	0.357
37.5	1	0.273	0.981	0.294
38.5	1	0.206	1	0.228
39.5	1	0.151	1	0.162
40.5	1	0.102	1	0.123
41.5	1	0.063	1	0.093
42.5	1	0.036	1	0.055
43.5	1	0.018	1	0.03
44.5	1	0.006	1	0.011
46	1	0	1	0

Grade 3
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
12	0	1		
14.5	0.006	1		
15			0	1
16.5	0.013	1	0.006	1
17.5	0.013	0.999	0.013	1
18.5	0.019	0.999	0.019	1
19.5	0.038	0.997	0.032	0.997
20.5	0.064	0.997	0.051	0.996
21.5	0.096	0.996	0.096	0.993
22.5	0.102	0.996	0.122	0.991
23.5	0.14	0.996	0.186	0.99
24.5	0.166	0.989	0.244	0.984
25.5	0.236	0.982	0.308	0.981
26.5	0.331	0.973	0.353	0.978
27.5	0.395	0.962	0.423	0.966
28.5	0.433	0.947	0.506	0.953
29.5	0.516	0.936	0.558	0.937
30.5	0.554	0.923	0.615	0.92
31.5	0.643	0.9	0.673	0.887
32.5	0.701	0.881	0.731	0.858
33.5	0.771	0.844	**0.814**	**0.821**
34.5	0.828	0.794	0.865	0.766
35.5	**0.879**	**0.731**	0.923	0.709
36.5	0.911	0.643	0.962	0.65
37.5	0.968	0.58	0.974	0.581
38.5	0.981	0.504	0.981	0.511
39.5	0.987	0.395	0.987	0.425
40.5	0.987	0.302	0.987	0.334
41.5	0.994	0.212	1	0.244
42.5	0.994	0.144	1	0.159
43.5	0.994	0.073	1	0.103
44.5	1	0.027	1	0.034
46	1	0	1	0

Grade 4

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	892
	Negative	130
	Missing	1211
Group 2	Positive[a]	879
	Negative	138
	Missing	1163

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

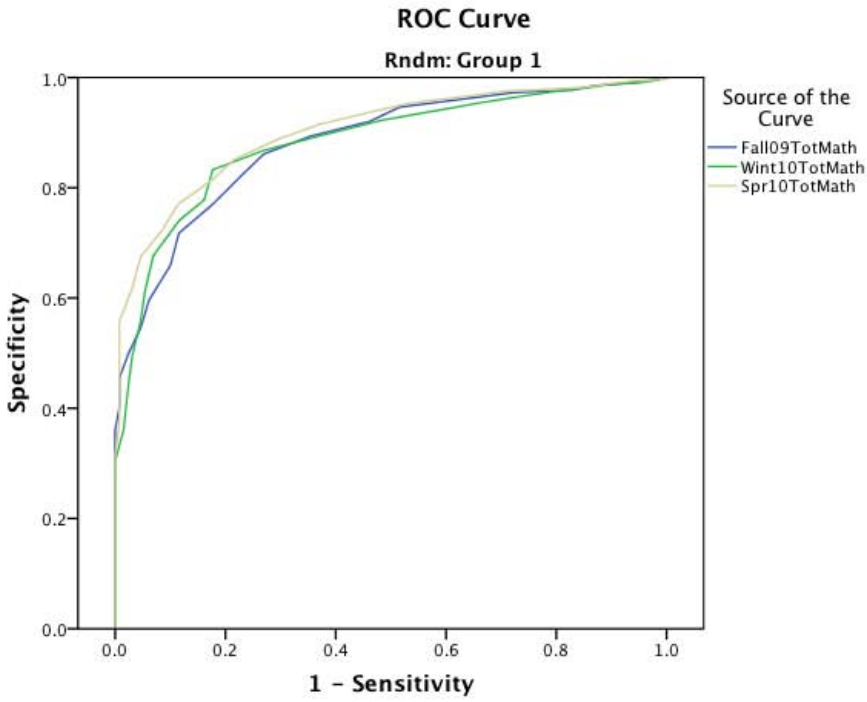
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.881	.014	.000	.854	.907
	Wint10TotMath	.883	.013	.000	.856	.909
	Spr10TotMath	.902	.011	.000	.880	.925
Group 2	Fall09TotMath	.890	.011	.000	.868	.913
	Wint10TotMath	.873	.014	.000	.846	.900
	Spr10TotMath	.888	.012	.000	.864	.912

a. Under the nonparametric assumption

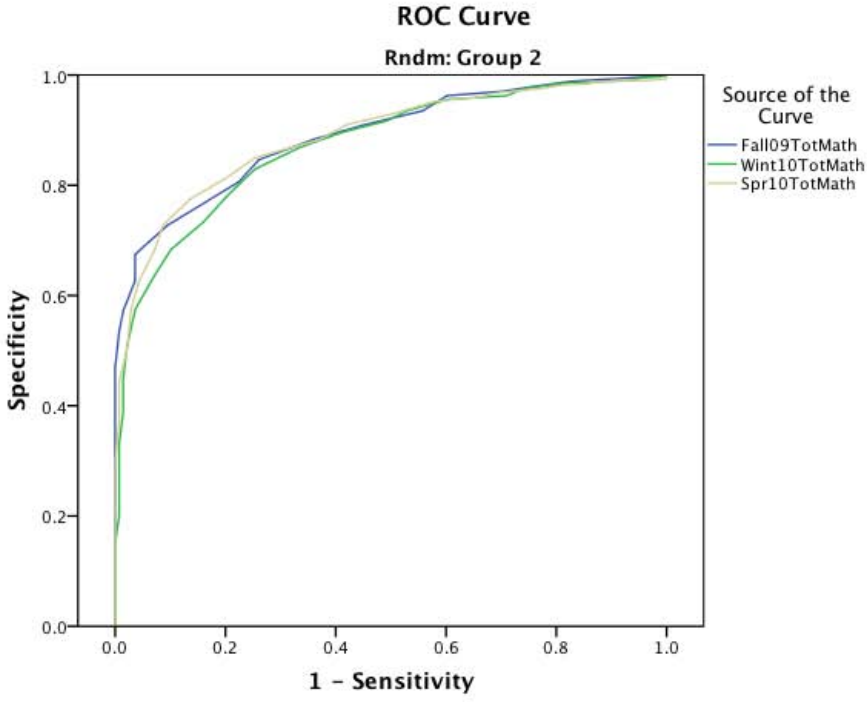
b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.



Diagonal segments are produced by ties.



Diagonal segments are produced by ties.

Grade 4
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
7	0	1	-	-
10	0	0.999	0	1
12.5	0.008	0.999	0.007	0.999
13.5	0.008	0.998	-	-
14.5	0.015	0.998	0.014	0.998
15.5	0.023	0.996	0.022	0.998
16.5	0.054	0.993	0.058	0.995
17.5	0.092	0.988	0.094	0.993
18.5	0.131	0.985	0.174	0.989
19.5	0.169	0.978	0.239	0.98
20.5	0.285	0.972	0.297	0.97
21.5	0.362	0.962	0.399	0.962
22.5	0.485	0.946	0.442	0.935
23.5	0.538	0.92	0.551	0.909
24.5	0.646	0.893	0.638	0.884
25.5	0.731	0.861	0.739	0.846
26.5	0.769	0.824	0.775	0.807
27.5	0.823	0.77	0.848	0.762
28.5	**0.885**	**0.717**	**0.906**	**0.727**
29.5	0.9	0.659	0.964	0.675
30.5	0.938	0.596	0.964	0.627
31.5	0.954	0.546	0.986	0.572
32.5	0.977	0.497	0.993	0.535
33.5	0.992	0.455	1	0.47
34.5	0.992	0.404	1	0.411
35.5	1	0.361	1	0.357
36.5	1	0.321	1	0.305
37.5	1	0.262	1	0.261
38.5	1	0.213	1	0.207
39.5	1	0.152	1	0.155
40.5	1	0.109	1	0.116
41.5	1	0.071	1	0.071
42.5	1	0.04	1	0.043
43.5	1	0.02	1	0.023
44.5	1	0.007	1	0.006
46	1	0	1	0

Grade 4
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
12	0	1	-	-
14.5	0	0.999	0.007	0.999
15.5	-	-	0.014	0.997
16.5	0.008	0.998	0.022	0.997
17.5	0.023	0.994	0.043	0.995
18.5	0.054	0.99	0.065	0.99
19.5	0.108	0.988	0.174	0.986
20.5	0.138	0.982	0.21	0.982
21.5	0.208	0.974	0.261	0.975
22.5	0.262	0.966	0.29	0.962
23.5	0.338	0.954	0.399	0.956
24.5	0.408	0.942	0.471	0.935
25.5	0.515	0.923	0.507	0.917
26.5	0.623	0.896	0.587	0.896
27.5	0.731	0.868	0.667	0.868
28.5	**0.823**	**0.833**	0.746	0.829
29.5	0.838	0.778	0.797	0.78
30.5	0.885	0.74	**0.841**	**0.733**
31.5	0.931	0.677	0.899	0.684
32.5	0.946	0.611	0.928	0.638
33.5	0.954	0.558	0.964	0.575
34.5	0.969	0.494	0.978	0.509
35.5	0.977	0.434	0.986	0.448
36.5	0.985	0.361	0.986	0.388
37.5	1	0.305	0.993	0.332
38.5	1	0.254	0.993	0.265
39.5	1	0.197	0.993	0.201
40.5	1	0.146	1	0.151
41.5	1	0.092	1	0.1
42.5	1	0.062	1	0.059
43.5	1	0.034	1	0.031
44.5	1	0.011	1	0.01
46	1	0	1	0

Grade 4
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
9	0	1	-	-
11.5	0	0.999	-	-
12	-	-	0	1
14	0	0.998	0	0.997
15.5	0.015	0.997	0	0.993
16.5	0.023	0.996	0.022	0.991
17.5	0.038	0.994	0.036	0.99
18.5	0.054	0.994	0.051	0.99
19.5	0.085	0.991	0.08	0.99
20.5	0.108	0.989	0.138	0.987
21.5	0.123	0.985	0.138	0.984
22.5	0.154	0.982	0.188	0.982
23.5	0.231	0.978	0.232	0.975
24.5	0.292	0.975	0.304	0.968
25.5	0.362	0.966	0.348	0.959
26.5	0.469	0.953	0.42	0.952
27.5	0.523	0.941	0.493	0.931
28.5	0.631	0.915	0.58	0.91
29.5	0.708	0.887	0.63	0.883
30.5	0.785	0.851	0.746	0.85
31.5	**0.823**	**0.815**	0.797	0.815
32.5	0.885	0.771	0.862	0.776
33.5	0.915	0.722	**0.913**	**0.728**
34.5	0.954	0.675	0.928	0.685
35.5	0.969	0.618	0.957	0.627
36.5	0.992	0.558	0.971	0.577
37.5	0.992	0.506	0.978	0.503
38.5	0.992	0.448	0.993	0.444
39.5	0.992	0.379	0.993	0.371
40.5	1	0.312	1	0.297
41.5	1	0.24	1	0.247
42.5	1	0.175	1	0.176
43.5	1	0.109	1	0.104
44.5	1	0.039	1	0.041
46	1	0	1	0

Grade 5

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	1008
	Negative	163
	Missing	1084
Group 2	Positive[a]	984
	Negative	181
	Missing	1069

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

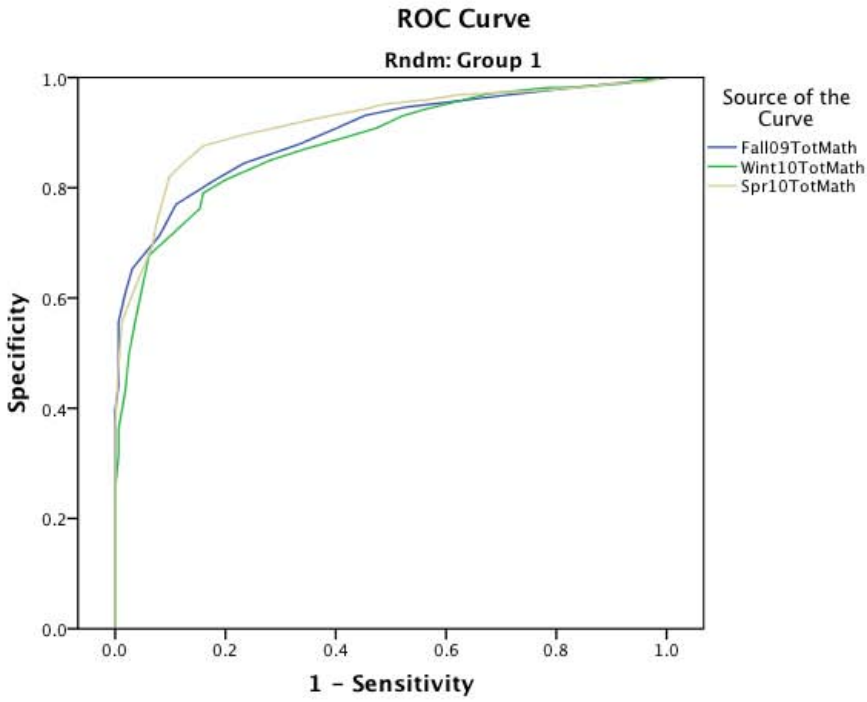
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.897	.010	.000	.877	.918
	Wint10TotMath	.881	.012	.000	.858	.905
	Spr10TotMath	.916	.010	.000	.897	.935
Group 2	Fall09TotMath	.867	.013	.000	.842	.892
	Wint10TotMath	.899	.011	.000	.877	.921
	Spr10TotMath	.903	.011	.000	.881	.925

a. Under the nonparametric assumption

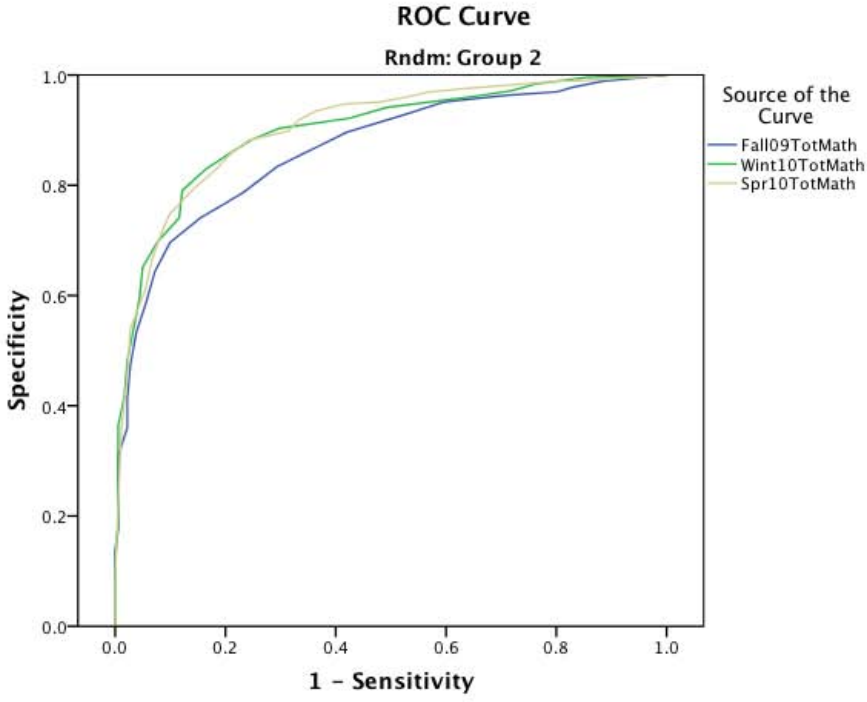
b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.



Diagonal segments are produced by ties.



Diagonal segments are produced by ties.

Grade 5
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
11	0	1	-	-
12	-	-	0	1
12.5	0.006	0.999		
13.5	0.018	0.999	0.006	0.999
14.5	0.037	0.997	0.022	0.999
15.5	0.043	0.994	0.039	0.996
16.5	0.061	0.993	0.072	0.993
17.5	0.104	0.988	0.116	0.989
18.5	0.172	0.981	0.171	0.978
19.5	0.282	0.969	0.199	0.97
20.5	0.362	0.959	0.287	0.963
21.5	0.472	0.946	0.403	0.951
22.5	0.546	0.932	0.47	0.93
23.5	0.595	0.91	0.58	0.896
24.5	0.669	0.878	0.635	0.869
25.5	0.767	0.844	0.707	0.833
26.5	**0.822**	**0.813**	0.768	0.787
27.5	0.89	0.77	**0.845**	**0.741**
28.5	0.92	0.712	0.901	0.696
29.5	0.969	0.653	0.928	0.643
30.5	0.982	0.609	0.945	0.584
31.5	0.994	0.557	0.961	0.535
32.5	0.994	0.49	0.972	0.475
33.5	0.994	0.442	0.978	0.412
34.5	1	0.395	0.978	0.361
35.5	1	0.351	0.994	0.31
36.5	1	0.301	0.994	0.275
37.5	1	0.242	0.994	0.22
38.5	1	0.198	0.994	0.181
39.5	1	0.145	1	0.137
40.5	1	0.106	1	0.099
41.5	1	0.077	1	0.065
42.5	1	0.042	1	0.041
43.5	1	0.021	1	0.024
44.5	1	0.008	1	0.009
46	1	0	1	0

Grade 5
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
12	0	1	0	1
13.5	0.006	1	0.006	1
14.5	0.012	0.999	0.011	1
15.5	0.025	0.996	0.022	1
16.5	0.055	0.994	0.039	0.999
17.5	0.067	0.99	0.083	0.998
18.5	0.104	0.987	0.144	0.996
19.5	0.172	0.982	0.182	0.991
20.5	0.221	0.981	0.238	0.984
21.5	0.325	0.97	0.282	0.972
22.5	0.368	0.959	0.348	0.961
23.5	0.442	0.941	0.42	0.952
24.5	0.479	0.931	0.508	0.941
25.5	0.528	0.908	0.575	0.922
26.5	0.595	0.888	0.702	0.903
27.5	0.656	0.87	0.751	0.883
28.5	0.718	0.85	0.785	0.863
29.5	0.798	0.815	**0.834**	**0.83**
30.5	0.84	0.791	0.878	0.791
31.5	0.847	0.762	0.884	0.741
32.5	**0.89**	**0.722**	0.923	0.698
33.5	0.939	0.678	0.95	0.651
34.5	0.951	0.619	0.956	0.596
35.5	0.963	0.561	0.967	0.539
36.5	0.975	0.495	0.978	0.483
37.5	0.982	0.432	0.983	0.417
38.5	0.994	0.363	0.994	0.365
39.5	0.994	0.315	0.994	0.306
40.5	1	0.255	0.994	0.232
41.5	1	0.186	0.994	0.182
42.5	1	0.127	1	0.122
43.5	1	0.065	1	0.067
44.5	1	0.026	1	0.032
46	1	0	1	0

Grade 5
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
6	0	1	-	-
10	0.006	1	-	-
11	-	-	0	1
12.5	-	-	0	0.999
13.5	0.012	1	0.011	0.999
14.5	0.018	0.998	0.017	0.999
15.5	0.018	0.996	0.028	0.998
16.5	0.031	0.993	0.039	0.998
17.5	0.043	0.991	0.05	0.996
18.5	0.067	0.991	0.072	0.995
19.5	0.086	0.99	0.105	0.994
20.5	0.117	0.987	0.149	0.99
21.5	0.141	0.983	0.199	0.989
22.5	0.221	0.977	0.249	0.985
23.5	0.264	0.974	0.326	0.979
24.5	0.301	0.973	0.376	0.975
25.5	0.38	0.968	0.436	0.968
26.5	0.429	0.96	0.47	0.96
27.5	0.515	0.951	0.519	0.951
28.5	0.54	0.944	0.586	0.947
29.5	0.595	0.934	0.635	0.935
30.5	0.644	0.924	0.669	0.918
31.5	0.706	0.91	0.685	0.898
32.5	0.773	0.895	0.757	0.882
33.5	0.84	0.876	0.79	0.858
34.5	0.871	0.849	**0.823**	**0.823**
35.5	**0.902**	**0.82**	0.856	0.795
36.5	0.914	0.776	0.901	0.749
37.5	0.926	0.73	0.917	0.711
38.5	0.933	0.694	0.934	0.664
39.5	0.963	0.621	0.945	0.612
40.5	0.988	0.557	0.972	0.541
41.5	0.994	0.477	0.978	0.454
42.5	1	0.367	0.989	0.358
43.5	1	0.248	0.994	0.224
44.5	1	0.1	1	0.083
46	1	0	1	0

Grade 6

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	724
	Negative	174
	Missing	1326
Group 2	Positive[a]	738
	Negative	178
	Missing	1315

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

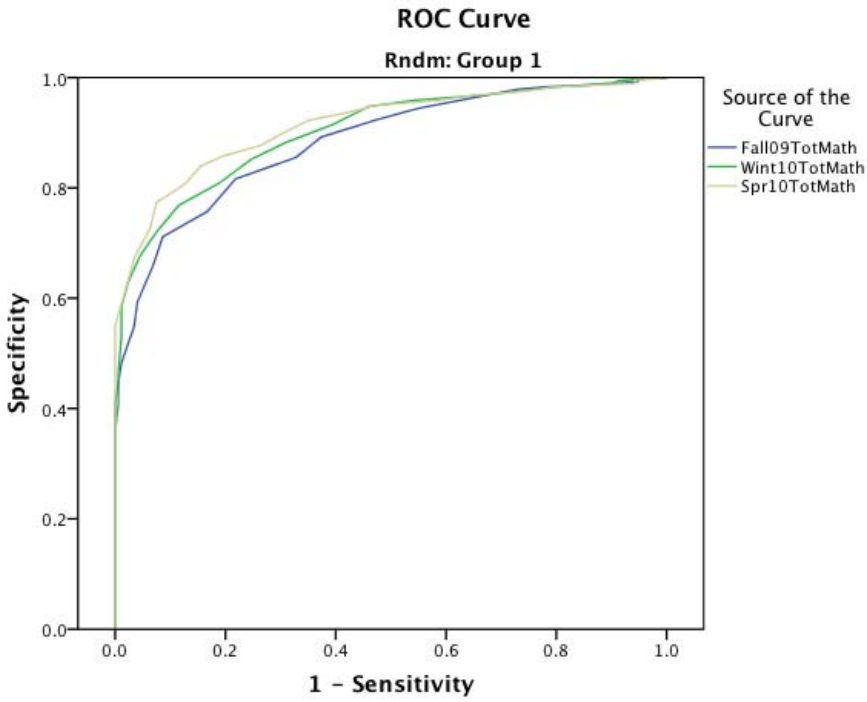
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.883	.012	.000	.860	.907
	Wint10TotMath	.902	.011	.000	.881	.923
	Spr10TotMath	.914	.010	.000	.895	.933
Group 2	Fall09TotMath	.902	.011	.000	.881	.924
	Wint10TotMath	.913	.010	.000	.893	.933
	Spr10TotMath	.922	.010	.000	.902	.942

a. Under the nonparametric assumption

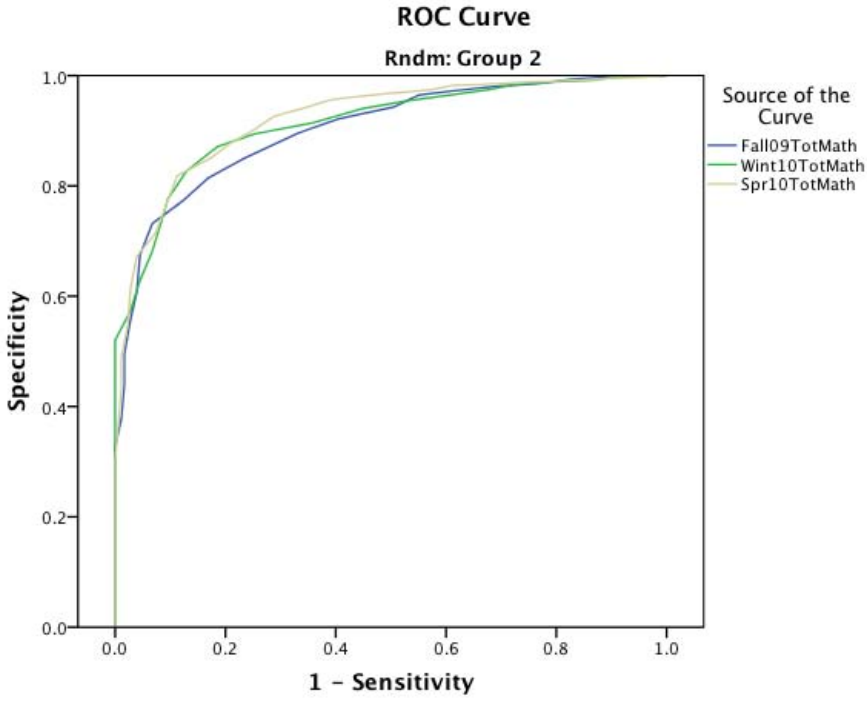
b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.



Diagonal segments are produced by ties.



Diagonal segments are produced by ties.

Grade 6
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
10	-	-	0	1
11	0	1	-	-
11.5	-	-	0.006	1
12.5	0.006	0.999	0.011	1
13.5	0.023	0.999	0.022	1
14.5	0.052	0.999	0.039	0.999
15.5	0.052	0.993	0.067	0.999
16.5	0.08	0.99	0.124	0.997
17.5	0.115	0.988	0.174	0.993
18.5	0.167	0.985	0.236	0.985
19.5	0.218	0.983	0.303	0.981
20.5	0.276	0.978	0.382	0.973
21.5	0.362	0.961	0.449	0.965
22.5	0.448	0.945	0.494	0.943
23.5	0.529	0.923	0.596	0.921
24.5	0.626	0.892	0.669	0.896
25.5	0.672	0.855	0.764	0.851
26.5	0.782	0.816	**0.831**	**0.814**
27.5	0.833	0.757	0.876	0.774
28.5	**0.914**	**0.711**	0.933	0.732
29.5	0.931	0.66	0.955	0.675
30.5	0.96	0.593	0.961	0.608
31.5	0.966	0.55	0.972	0.56
32.5	0.989	0.483	0.983	0.496
33.5	1	0.41	0.983	0.442
34.5	1	0.358	0.989	0.378
35.5	1	0.308	1	0.328
36.5	1	0.258	1	0.271
37.5	1	0.22	1	0.224
38.5	1	0.186	1	0.19
39.5	1	0.145	1	0.15
40.5	1	0.106	1	0.125
41.5	1	0.077	1	0.092
42.5	1	0.047	1	0.069
43.5	1	0.029	1	0.05
44.5	1	0.015	1	0.02
46	1	0	1	0

Grade 6
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
7	0	1		
9.5	0.006	1		
10			0	1
11.5	0.011	1		
12			0.011	1
12.5	0.017	0.999		
13.5	0.046	0.997	0.017	1
14.5	0.057	0.997	0.022	1
15.5	0.069	0.996	0.056	0.999
16.5	0.086	0.994	0.107	0.996
17.5	0.098	0.99	0.129	0.992
18.5	0.155	0.986	0.197	0.989
19.5	0.213	0.982	0.275	0.984
20.5	0.27	0.975	0.326	0.974
21.5	0.351	0.967	0.393	0.965
22.5	0.46	0.959	0.472	0.954
23.5	0.54	0.948	0.551	0.94
24.5	0.603	0.916	0.64	0.915
25.5	0.69	0.883	0.747	0.894
26.5	0.753	0.852	0.815	0.871
27.5	**0.81**	**0.809**	**0.871**	**0.827**
28.5	0.885	0.768	0.904	0.776
29.5	0.925	0.72	0.916	0.737
30.5	0.954	0.678	0.933	0.682
31.5	0.977	0.628	0.955	0.629
32.5	0.989	0.584	0.972	0.575
33.5	0.989	0.532	1	0.52
34.5	0.994	0.465	1	0.466
35.5	0.994	0.409	1	0.417
36.5	1	0.358	1	0.374
37.5	1	0.308	1	0.328
38.5	1	0.251	1	0.272
39.5	1	0.217	1	0.214
40.5	1	0.166	1	0.164
41.5	1	0.124	1	0.123
42.5	1	0.068	1	0.089
43.5	1	0.039	1	0.049
44.5	1	0.018	1	0.016
46	1	0	1	0

Grade 6
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
10			0	1
11	0	1		
11.5			0.006	1
12.5	0.011	0.999	0.011	0.999
13.5	0.029	0.997	0.034	0.997
14.5	0.052	0.996	0.067	0.996
15.5	0.057	0.996	0.073	0.996
16.5	0.057	0.989	0.101	0.996
17.5	0.098	0.988	0.118	0.993
18.5	0.155	0.985	0.157	0.992
19.5	0.213	0.982	0.219	0.989
20.5	0.236	0.978	0.264	0.988
21.5	0.287	0.972	0.337	0.984
22.5	0.351	0.968	0.388	0.982
23.5	0.414	0.959	0.427	0.974
24.5	0.448	0.956	0.506	0.967
25.5	0.523	0.95	0.584	0.959
26.5	0.586	0.935	0.612	0.955
27.5	0.649	0.923	0.652	0.943
28.5	0.701	0.896	0.713	0.925
29.5	0.736	0.877	0.747	0.902
30.5	0.805	0.858	0.792	0.877
31.5	0.845	0.84	0.826	0.851
32.5	**0.874**	**0.807**	**0.888**	**0.818**
33.5	0.925	0.773	0.904	0.774
34.5	0.937	0.727	0.927	0.714
35.5	0.966	0.673	0.961	0.672
36.5	0.983	0.61	0.972	0.617
37.5	1	0.551	0.978	0.546
38.5	1	0.492	0.989	0.489
39.5	1	0.416	0.989	0.434
40.5	1	0.349	0.994	0.366
41.5	1	0.285	1	0.304
42.5	1	0.213	1	0.236
43.5	1	0.135	1	0.153
44.5	1	0.052	1	0.069
46	1	0	1	0

Grade 7

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	736
	Negative	156
	Missing	1254
Group 2	Positive[a]	772
	Negative	149
	Missing	1198

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

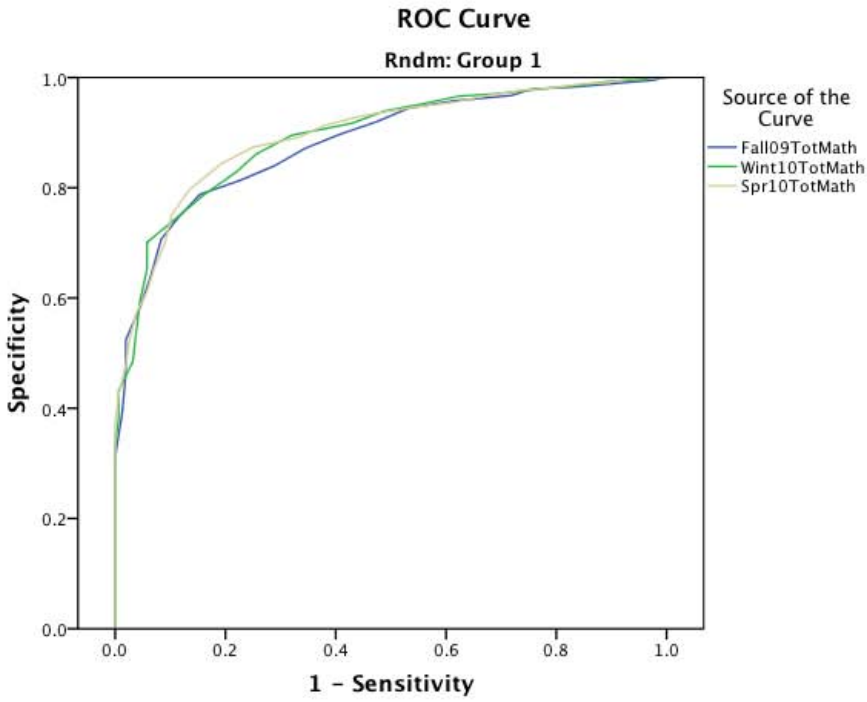
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.882	.013	.000	.858	.907
	Wint10TotMath	.893	.012	.000	.869	.917
	Spr10TotMath	.896	.012	.000	.873	.920
Group 2	Fall09TotMath	.879	.013	.000	.854	.904
	Wint10TotMath	.892	.012	.000	.869	.914
	Spr10TotMath	.916	.010	.000	.896	.936

a. Under the nonparametric assumption

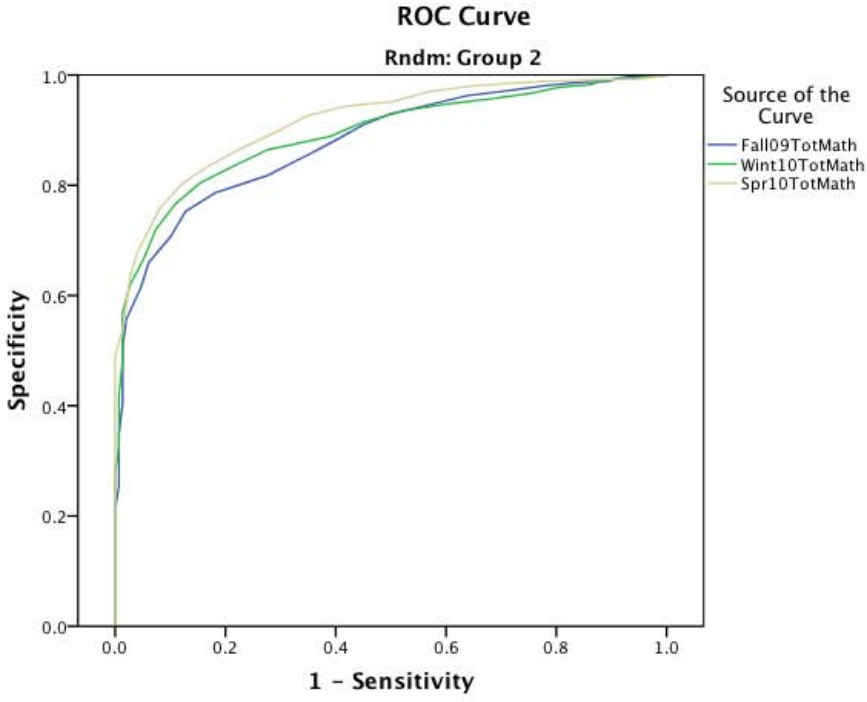
b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.



Diagonal segments are produced by ties.



Diagonal segments are produced by ties.

Grade 7
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
7	0	1	-	-
8	-	-	0	1
8.5	0.006	1	-	-
9.5	-	-	0.007	1
10	0.013	0.999	-	-
10.5	-	-	0.034	0.999
11.5	0.019	0.996	0.054	0.997
12.5	0.045	0.993	0.067	0.997
13.5	0.064	0.992	0.094	0.994
14.5	0.096	0.989	0.107	0.988
15.5	0.173	0.982	0.154	0.987
16.5	0.244	0.98	0.221	0.981
17.5	0.282	0.967	0.268	0.974
18.5	0.385	0.958	0.362	0.962
19.5	0.468	0.944	0.443	0.943
20.5	0.526	0.92	0.503	0.929
21.5	0.59	0.898	0.55	0.909
22.5	0.654	0.872	0.597	0.883
23.5	0.712	0.84	0.651	0.855
24.5	0.776	0.813	0.725	0.817
25.5	0.846	0.788	0.819	0.786
26.5	0.885	0.747	0.872	0.753
27.5	**0.917**	**0.707**	**0.899**	**0.707**
28.5	0.936	0.639	0.94	0.659
29.5	0.955	0.583	0.953	0.615
30.5	0.981	0.524	0.98	0.557
31.5	0.981	0.462	0.987	0.506
32.5	0.987	0.393	0.987	0.461
33.5	0.994	0.352	0.987	0.405
34.5	1	0.311	0.993	0.347
35.5	1	0.266	0.993	0.294
36.5	1	0.22	0.993	0.254
37.5	1	0.188	1	0.212
38.5	1	0.162	1	0.176
39.5	1	0.128	1	0.148
40.5	1	0.105	1	0.114
41.5	1	0.076	1	0.088
42.5	1	0.05	1	0.06
43.5	1	0.034	1	0.038
44.5	1	0.014	1	0.012
46	1	0	1	0

Grade 7
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
7	0	1	-	-
8	-	-	0	1
9	0.006	1	-	-
9.5	-	-	0.007	1
10.5	0.013	1	0.013	1
11.5	0.026	1	0.027	0.997
12.5	0.051	0.996	0.034	0.996
13.5	0.083	0.995	0.087	0.992
14.5	0.103	0.993	0.121	0.99
15.5	0.154	0.986	0.134	0.983
16.5	0.237	0.978	0.195	0.978
17.5	0.314	0.97	0.242	0.968
18.5	0.378	0.966	0.315	0.957
19.5	0.442	0.952	0.403	0.947
20.5	0.513	0.939	0.477	0.935
21.5	0.571	0.917	0.55	0.915
22.5	0.679	0.895	0.611	0.889
23.5	0.744	0.861	0.725	0.864
24.5	0.782	0.827	0.792	0.832
25.5	0.84	0.787	0.846	0.804
26.5	0.885	0.749	0.893	0.764
27.5	**0.942**	**0.701**	**0.926**	**0.72**
28.5	0.942	0.652	0.946	0.671
29.5	0.955	0.594	0.973	0.619
30.5	0.962	0.541	0.987	0.569
31.5	0.968	0.485	0.987	0.517
32.5	0.994	0.432	0.987	0.482
33.5	0.994	0.382	0.993	0.418
34.5	1	0.337	0.993	0.368
35.5	1	0.296	0.993	0.323
36.5	1	0.26	1	0.281
37.5	1	0.216	1	0.249
38.5	1	0.185	1	0.209
39.5	1	0.145	1	0.179
40.5	1	0.114	1	0.137
41.5	1	0.091	1	0.108
42.5	1	0.049	1	0.071
43.5	1	0.022	1	0.039
44.5	1	0.003	1	0.016
46	1	0	1	0

Grade 7
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
8	0	1	-	-
9	-	-	0	1
9.5	0.006	1	-	-
10.5	0.019	1	0.007	1
11.5	0.026	1	0.013	1
12.5	0.051	1	0.013	0.999
13.5	0.071	0.997	0.02	0.996
14.5	0.083	0.995	0.06	0.992
15.5	0.109	0.99	0.114	0.992
16.5	0.147	0.989	0.174	0.99
17.5	0.212	0.981	0.228	0.988
18.5	0.263	0.977	0.289	0.984
19.5	0.327	0.967	0.349	0.981
20.5	0.385	0.955	0.43	0.97
21.5	0.462	0.946	0.497	0.952
22.5	0.551	0.931	0.584	0.943
23.5	0.622	0.913	0.651	0.926
24.5	0.667	0.891	0.711	0.895
25.5	0.75	0.874	0.772	0.867
26.5	**0.808**	**0.844**	**0.839**	**0.83**
27.5	0.865	0.796	0.879	0.802
28.5	0.897	0.751	0.919	0.758
29.5	0.91	0.698	0.94	0.718
30.5	0.929	0.654	0.96	0.679
31.5	0.942	0.611	0.973	0.635
32.5	0.962	0.573	0.98	0.584
33.5	0.974	0.523	0.987	0.536
34.5	0.981	0.478	1	0.491
35.5	0.994	0.425	1	0.446
36.5	1	0.372	1	0.407
37.5	1	0.325	1	0.351
38.5	1	0.293	1	0.298
39.5	1	0.227	1	0.271
40.5	1	0.186	1	0.224
41.5	1	0.149	1	0.166
42.5	1	0.087	1	0.12
43.5	1	0.05	1	0.075
44.5	1	0.018	1	0.028
46	1	0	1	0

Grade 8

Case Processing Summary[b]

Randomly Selected Groups	PLC	Valid N (listwise)
Group 1	Positive[a]	722
	Negative	127
	Missing	1394
Group 2	Positive[a]	734
	Negative	125
	Missing	1308

Larger values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is Meets or exceeds.

b. For split file Randomly Selected Groups = Group 2, the test variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group.

Area Under the Curve[c,d]

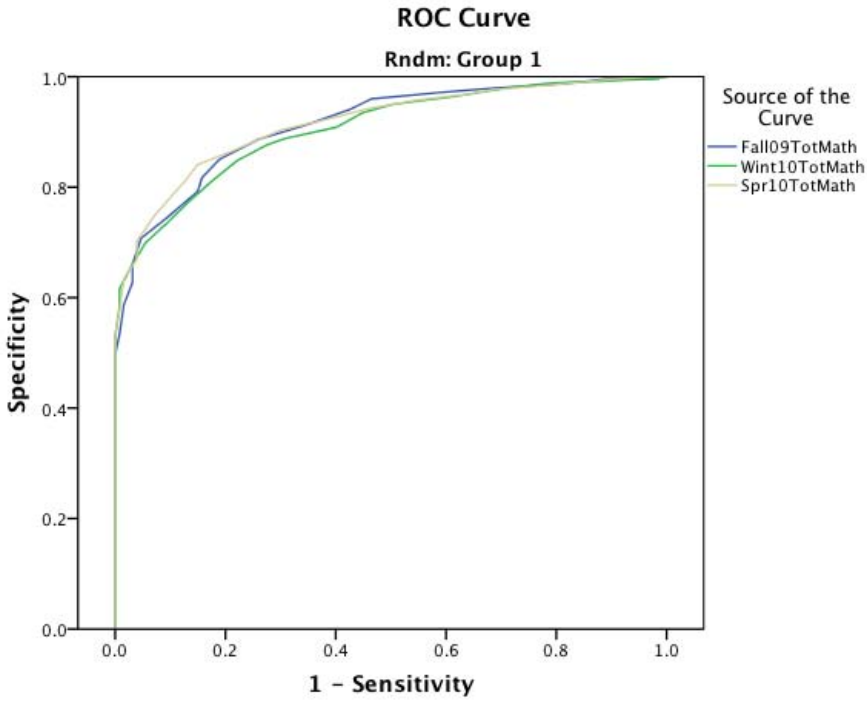
Randomly Selected Groups	Test Result Variable(s)	Area	Std. Error[a]	Asymptotic Sig.[b]	Asymptotic 95% Confidence Interval	
					Lower Bound	Upper Bound
Group 1	Fall09TotMath	.914	.011	.000	.892	.935
	Wint10TotMath	.905	.011	.000	.883	.927
	Spr10TotMath	.916	.010	.000	.896	.937
Group 2	Fall09TotMath	.893	.012	.000	.870	.917
	Wint10TotMath	.901	.012	.000	.878	.924
	Spr10TotMath	.919	.010	.000	.899	.939

a. Under the nonparametric assumption

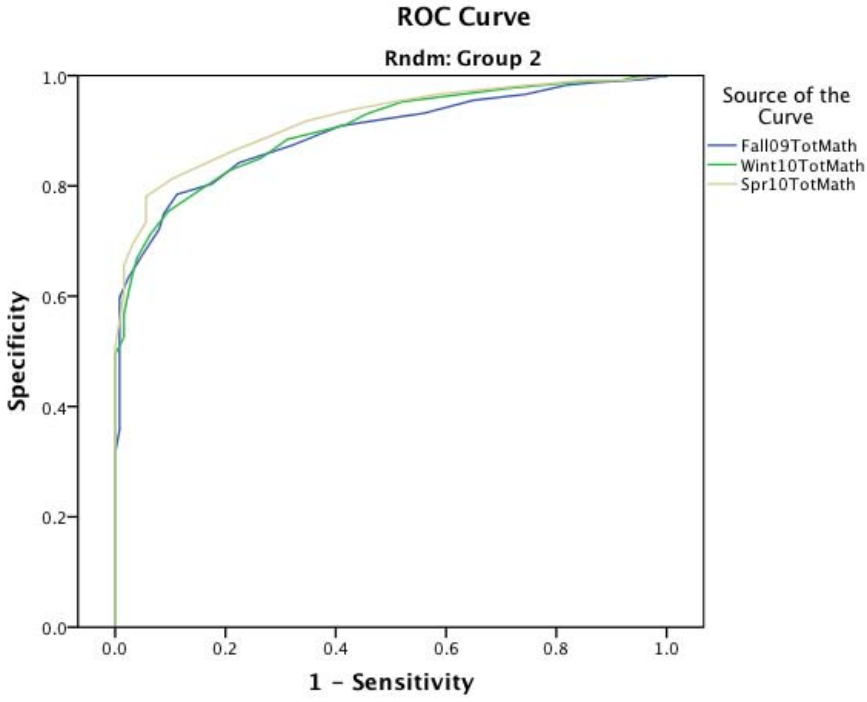
b. Null hypothesis: true area = 0.5

c. For split file Randomly Selected Groups = Group 1, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Randomly Selected Groups = Group 2, the test result variable(s): Fall09TotMath, Wint10TotMath, Spr10TotMath has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.



Diagonal segments are produced by ties.



Diagonal segments are produced by ties.

Grade 8
Fall Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
10	0	1	0	1
11.5	0.008	1	0	0.999
12.5	0.024	0.999	0.008	0.999
13.5	0.055	0.997	0.04	0.993
14.5	0.11	0.996	0.08	0.99
15.5	0.181	0.988	0.128	0.988
16.5	0.315	0.979	0.184	0.982
17.5	0.417	0.971	0.256	0.966
18.5	0.535	0.96	0.352	0.955
19.5	0.575	0.94	0.44	0.932
20.5	0.654	0.913	0.592	0.909
21.5	0.74	0.886	0.68	0.873
22.5	0.811	0.85	0.776	0.842
23.5	0.843	0.817	0.824	0.804
24.5	0.85	0.792	0.888	0.785
25.5	0.906	0.745	0.912	0.749
26.5	0.953	0.708	0.92	0.722
27.5	0.969	0.661	0.952	0.673
28.5	0.969	0.627	0.976	0.634
29.5	0.984	0.587	0.992	0.598
30.5	0.992	0.535	0.992	0.537
31.5	1	0.497	0.992	0.504
32.5	1	0.447	0.992	0.465
33.5	1	0.396	0.992	0.411
34.5	1	0.341	0.992	0.358
35.5	1	0.292	1	0.315
36.5	1	0.263	1	0.266
37.5	1	0.215	1	0.222
38.5	1	0.173	1	0.18
39.5	1	0.136	1	0.147
40.5	1	0.109	1	0.127
41.5	1	0.079	1	0.101
42.5	1	0.055	1	0.071
43.5	1	0.026	1	0.04
44.5	1	0.014	1	0.025
46	1	0	1	0

Grade 8
Winter Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
9	0	1	0	1
10.5	0.016	0.999	0.008	1
11.5	0.016	0.996		
12			0.016	1
12.5	0.071	0.994		
13.5	0.118	0.992	0.056	0.999
14.5	0.173	0.99	0.08	0.992
15.5	0.22	0.988	0.168	0.988
16.5	0.291	0.979	0.288	0.977
17.5	0.386	0.964	0.352	0.969
18.5	0.496	0.95	0.48	0.952
19.5	0.551	0.935	0.544	0.931
20.5	0.598	0.909	0.584	0.91
21.5	0.693	0.888	0.688	0.884
22.5	0.724	0.877	0.736	0.85
23.5	0.78	0.848	0.792	0.828
24.5	**0.819**	**0.816**	**0.848**	**0.792**
25.5	0.866	0.774	0.904	0.753
26.5	0.906	0.735	0.936	0.713
27.5	0.945	0.699	0.96	0.67
28.5	0.969	0.661	0.968	0.642
29.5	0.992	0.616	0.976	0.606
30.5	0.992	0.583	0.984	0.568
31.5	1	0.529	0.984	0.526
32.5	1	0.497	1	0.495
33.5	1	0.457	1	0.444
34.5	1	0.429	1	0.41
35.5	1	0.386	1	0.375
36.5	1	0.359	1	0.335
37.5	1	0.31	1	0.294
38.5	1	0.267	1	0.253
39.5	1	0.227	1	0.217
40.5	1	0.186	1	0.173
41.5	1	0.143	1	0.144
42.5	1	0.102	1	0.098
43.5	1	0.058	1	0.057
44.5	1	0.021	1	0.023
46	1	0	1	0

Grade 8
Spring Benchmark

Cut Score	Group 1		Group 2	
	Sensitivity	Specificity	Sensitivity	Specificity
10	0	1		
10.5			0.008	1
11.5	0.024	1	0.032	0.999
12.5	0.047	0.999	0.048	0.996
13.5	0.094	0.996	0.072	0.992
14.5	0.15	0.99	0.16	0.99
15.5	0.228	0.983	0.216	0.985
16.5	0.315	0.976	0.256	0.982
17.5	0.362	0.968	0.336	0.974
18.5	0.457	0.957	0.408	0.967
19.5	0.543	0.942	0.496	0.952
20.5	0.606	0.925	0.568	0.939
21.5	0.701	0.903	0.656	0.917
22.5	0.748	0.882	0.72	0.89
23.5	0.787	0.866	0.792	0.861
24.5	0.85	0.841	0.848	0.835
25.5	**0.874**	**0.81**	**0.896**	**0.813**
26.5	0.898	0.784	0.944	0.781
27.5	0.929	0.748	0.944	0.734
28.5	0.961	0.702	0.968	0.695
29.5	0.961	0.669	0.984	0.657
30.5	0.984	0.634	0.984	0.606
31.5	0.992	0.576	0.992	0.556
32.5	1	0.536	1	0.51
33.5	1	0.496	1	0.477
34.5	1	0.435	1	0.428
35.5	1	0.386	1	0.395
36.5	1	0.337	1	0.342
37.5	1	0.291	1	0.296
38.5	1	0.237	1	0.251
39.5	1	0.195	1	0.218
40.5	1	0.159	1	0.184
41.5	1	0.122	1	0.131
42.5	1	0.079	1	0.093
43.5	1	0.033	1	0.052
44.5	1	0.011	1	0.019
46	1	0	1	0