Predicting Performance on the Washington Smarter Balanced Summative Assessments Based on NWEA MAP Growth Scores

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NWEA Psychometrics and Analytics

Linking Study Updates

Date	Description
2021-03	Conducted a linking study for grades 3–8 in ELA/literacy and mathematics based on the 2020 norms and Spring 2019 data.
2025-08	Updated the linking study based on the 2025 norms.

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Executive Summary

To predict student achievement on the Washington Smarter Balanced Assessment Consortium (WA SBAC) summative assessments in grades 3–8 English language arts/literacy (ELA) and mathematics, NWEA® conducted a linking study using Spring 2019 data to derive Rasch Unit (RIT) cut scores on the MAP® Growth™ assessments that correspond to the WA SBAC achievement levels. With this information, educators can identify students at risk of failing to meet state proficiency standards early in the year and provide tailored educational interventions. The linking study has been updated since the previous study to incorporate the most recent 2025 NWEA MAP Growth norms (NWEA, 2025).

Table E.1 presents the WA SBAC Level 3 achievement level cut scores and the corresponding MAP Growth RIT cut scores that allow teachers to identify students who are on track for proficiency (Level 3 or higher) on the state summative tests and those who are not. For example, the Level 3 cut score on the WA SBAC grade 3 ELA test is 2432. A grade 3 student with a MAP Growth reading RIT score of 191 in the fall is likely to meet proficiency on the WA SBAC ELA test in the spring, whereas a grade 3 student with a MAP Growth reading RIT score lower than 191 in the fall is in jeopardy of not meeting proficiency. MAP Growth cut scores for grade 2 are also provided so that educators can track early learners' progress toward proficiency on the WA SBAC tests by grade 3. These cut scores were derived based on the grade 3 cuts and the 2025 NWEA growth norms for the adjacent grade (i.e., grades 2 to 3).

Table E.1. MAP Growth Cut Scores for WA SBAC Proficiency

Assessment		Level 3 Cut Scores by Grade						
		2	3	4	5	6	7	8
ELA/Reading								
WA SBAC Spring		–	2432	2473	2502	2531	2552	2567
MAP Growth	Fall	176	191	202	205	213	217	221
	Winter	183	196	205	208	215	218	222
	Spring	187	199	207	210	216	219	223
Mathematics								
WA SBAC Spring		–	2436	2485	2528	2552	2567	2586
MAP Growth	Fall	176	187	203	215	218	226	234
	Winter	184	196	211	221	224	230	239
	Spring	190	202	216	225	228	233	241

Please note that the results in this report may differ from those found in the NWEA reporting system for individual districts. The typical growth scores from fall to spring or winter to spring used in this report are based on the default instructional weeks most encountered for each term (i.e., Weeks 4, 20, and 32 for fall, winter, and spring, respectively). However, instructional weeks often vary by district, so the cut scores in this report may differ slightly from the MAP Growth score reports that reflect the specific instructional weeks set by partners.

E.1. Assessment Overview

The WA SBAC grades 3–8 ELA and mathematics tests are Washington's state summative assessments aligned to the Washington State K–12 Learning Standards (Common Core State Standards). Based on their test scores, students are placed into one of four achievement levels: Level 1, Level 2, Level 3, and Level 4. The Level 3 cut score demarks the minimum level of achievement considered to be proficient for accountability purposes. MAP Growth tests are adaptive interim assessments aligned to state-specific content standards and administered in the fall, winter, and spring. Scores are reported on the RIT vertical scale with a range of 100–350.

E.2. Linking Methods

Based on scores from the Spring 2019 test administration, the equipercentile linking method was used to identify the spring MAP Growth scores that correspond to the spring WA SBAC achievement level cut scores. MAP Growth spring cut scores for grade 2 were then derived from the spring cuts for grade 3 and the growth norms for the adjacent grade (i.e., grades 2 to 3). Similarly, the MAP Growth cut scores for the fall and winter administrations of all grades were derived from the spring administration cuts and the growth norms for either fall to spring or winter to spring, respectively. The spring cuts[1] for mathematics were adjusted for score alignment before deriving the cuts for grade 2 spring and for all grades' fall and winter administrations.

E.3. Student Sample

Only students who took both the MAP Growth and WA SBAC assessments in Spring 2019 were included in the study sample. Table E.2 presents the weighted numbers of Washington students from 9 districts and 98 schools who were included in the linking study. The linking study sample is voluntary and can only include student scores from partners who share their data. Also, not all students in a state take MAP Growth. The sample may therefore not represent the general student population as well as it should. To ensure that the linking study sample represents the state student population in terms of race, sex, and achievement level, weighting (i.e., a statistical method that matches the distributions of the variables of interest to those of the target population) was applied to the sample. As a result, the RIT cuts derived from the study sample can be generalized to any student from the target population. All analyses in this study for grades 3–8 were conducted based on the weighted sample.

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[1] To enhance content validity, NWEA developed an Enhanced Item-Selection Algorithm (EISA) for the MAP Growth assessment to prioritize grade-level content. A pilot study (Meyer et al., 2023) showed that students taking MAP Growth with EISA demonstrated higher average math scores compared with those taking traditional MAP Growth. To improve score comparability, NWEA (Lewis & Kuhfeld, 2024) developed concordance tables to adjust mathematics scores from traditional assessments to align with scores from MAP Growth with EISA, or vice versa. Given that the data for this study were collected from traditional MAP Growth tests but that the results will be used for MAP Growth with EISA, the spring cuts for mathematics were adjusted using the concordance tables before being used to derive other cut scores. This score adjustment will become unnecessary for future linking studies once the new data from EISA tests are collected.

Table E.2. Linking Study Sample

Grade	# Students	
	ELA/Reading	Mathematics
3	1,759	2,259
4	1,547	2,204
5	2,231	2,727
6	2,076	2,422
7	1,999	2,307
8	1,840	1,955

E.4. Test Score Relationships

Correlations between MAP Growth RIT scores and WA SBAC scores range from 0.84 to 0.92 across content areas, as shown in Figure E.1. These values indicate a strong relationship among the scores, which is important validity evidence for the claim that MAP Growth scores are good predictors of performance on the WA SBAC summative assessments.

Figure E.1. Correlations Between MAP Growth and WA SBAC Test Scores
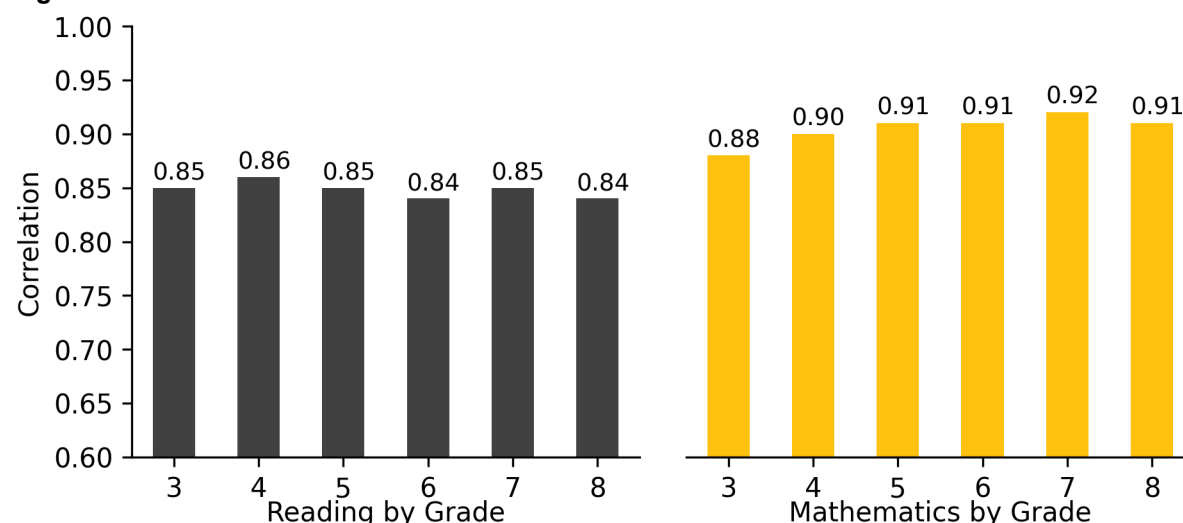
E.5. Accuracy of MAP Growth Classifications

Figure E.2 presents the classification accuracy statistics that show the proportion of students correctly classified by their RIT scores as proficient (Level 3 or higher) or not proficient (lower than Level 3) on the WA SBAC summative tests.[2] For example, the MAP Growth reading grade 3 Level 3 cut score has a 0.87 accuracy rate, meaning it accurately classified student achievement on the state tests for 87% of the sample. The results range from 0.83 to 0.89 across content areas, indicating that RIT scores have a high accuracy rate of identifying student proficiency on the WA SBAC summative tests.

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[2] The classification accuracy calculations for the mathematics spring cuts were based on the concorded cut scores.

Figure E.2. Accuracy of MAP Growth Classifications
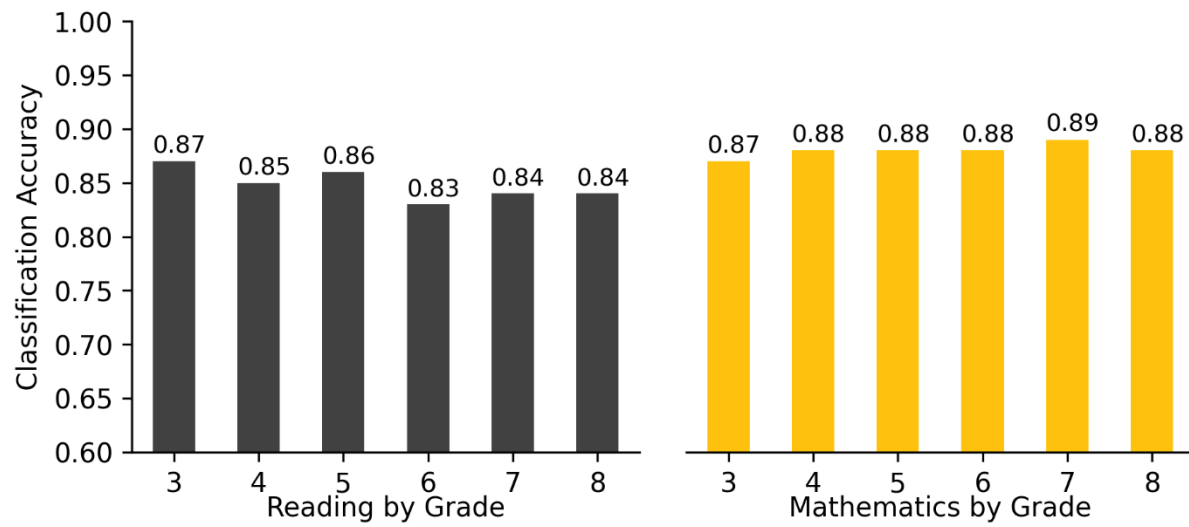
1. Introduction

1.1. Purpose of the Study

NWEA® is committed to providing partners with useful tools to help make inferences about student learning from MAP® Growth™ test scores. One important use of MAP Growth results is to predict a student's performance on the state summative assessment at different times throughout the year. This allows educators and parents to determine if a student is on track in their learning to meet state standards by the end of the year or, given a student's learning profile, is on track to obtain rigorous, realistic growth in their content knowledge and skills.

This report presents results from a linking study conducted by NWEA to statistically connect the scores of the Washington Smarter Balanced Assessment Consortium (WA SBAC) summative assessments in grades 3–8 English language arts/literacy (ELA) and mathematics with Rasch Unit (RIT) scores from the MAP Growth assessments taken during the Spring 2019 term. The linking study has been updated since the previous version to incorporate the most recent 2025 NWEA MAP Growth norms (NWEA, 2025). In this updated study, MAP Growth cut scores are also included for grade 2 so that educators can track early learners' progress toward proficiency on the WA SBAC summative tests by grade 3. This report presents the following results:

1. Student sample demographics
2. Descriptive statistics of test scores
3. MAP Growth cut scores that correspond to the WA SBAC achievement levels using the equipercentile linking procedure for the spring results and the 2025 norms for the fall and winter results
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency status on the WA SBAC summative tests
5. The probability of achieving grade-level proficiency on the WA SBAC assessment based on MAP Growth RIT scores from fall, winter, and spring using the 2025 norms

1.2. Assessment Overview

The WA SBAC grades 3–8 ELA and mathematics summative assessments are aligned to the Washington State K–12 Learning Standards (Common Core State Standards). Each assessment has three cut scores (i.e., the minimum score a student must get on a test to be placed in a certain achievement level) that distinguish between the following achievement levels: Level 1, Level 2, Level 3, and Level 4. The Level 3 cut score demarks the minimum level of performance considered to be proficient for accountability purposes.

MAP Growth interim assessments from NWEA are computer adaptive and aligned to state-specific content standards. Scores are reported on the RIT vertical scale with a range of 100–350. Each content area has its own scale. To aid the interpretation of scores, NWEA periodically conducts norming studies of student and school performance on MAP Growth. Achievement status norms show how well a student performed on the MAP Growth test compared with students in the norming group by associating the student's performance on the MAP Growth test, expressed as a RIT score, with a percentile ranking. Growth norms provide expected score gains across test administrations (e.g., the relative evaluation of a student's growth from fall to spring). The most recent norms study was conducted in 2025 (NWEA, 2025).

2. Methods

2.1. Data Collection

This linking study is based on data from the Spring 2019 administrations of the MAP Growth and WA SBAC assessments. NWEA requested that Washington districts recruited to participate in the study share their student and score data for the target term. Districts also permitted NWEA to access students' associated MAP Growth scores from the NWEA in-house database. Once state score information was available to NWEA, each student's state testing record was matched to their MAP Growth score by using the student's first and last names, date of birth, student ID, and other available identifying information. Only students who took both the MAP Growth and WA SBAC assessments in Spring 2019 were included in the study sample.

2.2. Post-Stratification Weighting

Post-stratification weights were applied to the calculations to ensure that the linking study sample represented the state population in terms of race, sex, and achievement level. These variables were selected because they are correlated with the student's academic achievement within this study and are often provided in the data for the state population. The weighted sample matches the target population as closely as possible for the key demographics and test score characteristics. Specifically, a raking procedure was used to calculate the post-stratification weights and improve the representativeness of the sample. Raking uses iterative procedures to obtain weights that match sample marginal distributions to known population margins. The following steps were taken during this process:

1. Calculate marginal distributions of race, sex, and achievement level for the sample and population.
2. Calculate post-stratification weights with the rake function from the survey package in R (Lumley, 2019).
3. Apply the weights to the sample before conducting the linking study analyses.

2.3. MAP Growth Cut Scores

The equipercentile linking method (Kolen & Brennan, 2004) was used to identify the spring MAP Growth RIT scores that correspond to the spring WA SBAC achievement level cut scores. Spring cuts for grade 2 were derived based on the cuts for grade 3 and the 2025 NWEA growth norms. RIT fall and winter cut scores that predict proficiency on the spring WA SBAC summative tests were then projected using the 2025 growth norms. Percentile ranks are also provided that show how a nationally representative sample of students in the same grade scored on MAP Growth for each administration, which is an important interpretation of RIT scores. This is useful for understanding (1) how student scores compare with peers nationwide and (2) the relative rigor of a state's achievement level designations for its summative assessment.

The MAP Growth spring cut scores for grades 3–8 could be calculated using the equipercentile linking method because that data are directly connected to the WA SBAC spring data used in the study. The equipercentile linking procedure matches scores on the two scales that have the same percentile rank (i.e., the proportion of tests at or below each score). For example, let x represent a score on Test X (e.g., WA SBAC). Its equipercentile equivalent score on Test Y (e.g., MAP Growth), $e_y(x)$, can be obtained through a cumulative-distribution-based linking function defined as:

$$e_y(x) = G^{-1}[P(x)]$$

where $e_y(x)$ is the equipercentile equivalent of score x on the WA SBAC tests on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on the WA SBAC tests, and G^{-1} is the inverse of the percentile rank function for MAP Growth that indicates the score on MAP Growth corresponding to a given percentile. Polynomial loglinear pre-smoothing was applied to reduce irregularities of the score distributions and equipercentile linking curve.

The MAP Growth conditional growth norms provide students' expected score gains across terms, such as growth from fall or winter to spring within the same grade or from spring of a lower grade to the spring of the adjacent higher grade. This information can be used to calculate the fall and winter cut scores for grades 3–8 and the fall, winter, and spring cut scores for grade 2. The equation below was used to determine the previous term's or grade's MAP Growth score needed to reach the spring cut score, considering the expected growth associated with the previous RIT score:

$$RIT_{PredSpring} = RIT_{previous} + g$$

where:
- $RIT_{PredSpring}$ is the predicted MAP Growth spring score,
- $RIT_{previous}$ is the previous term's or grade's RIT score, and
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT.

To derive the spring cut scores for grade 2, the growth score from spring of one year to the next was used (i.e., the growth score from spring grade 2 to spring grade 3). The calculation of fall and winter cuts for grade 2 followed the same process as the other grades. For example, the growth score from fall to spring in grade 2 was used to calculate the fall cuts for grade 2.

2.4. Classification Accuracy

The degree to which MAP Growth predicts student proficiency status on the WA SBAC tests can be described using classification accuracy statistics based on the MAP Growth spring RIT cut scores that show the proportion of students correctly classified by their RIT scores as proficient (Level 3 or higher) or not proficient (lower than Level 3). Table 2.1 describes the classification accuracy statistics provided in this report (Pommerich et al., 2004). The results are based on the Spring 2019 MAP Growth and WA SBAC data for the Level 3 cut score.

Table 2.1. Description of Classification Accuracy Summary Statistics

Statistic	Description	Interpretation
Overall Classification Accuracy Rate	(TP + TN) / (total sample size)	Proportion of the study sample whose proficiency classification on the state test was correctly predicted by MAP Growth cut scores
False Negative (FN) Rate	FN / (FN + TP)	Proportion of students identified by MAP Growth as not proficient in those observed as proficient on the state test
False Positive (FP) Rate	FP / (FP + TN)	Proportion of students identified by MAP Growth as not proficient in those observed as not proficient on the state test
Sensitivity	TP / (TP + FN)	Proportion of students identified by MAP Growth as proficient in those observed as such on the state test

Statistic	Description	Interpretation
Specificity	TN / (TN + FP)	Proportion of students identified by MAP Growth as not proficient in those observed as such on the state test
Precision	TP / (TP + FP)	Proportion of students observed as proficient on the state test in those identified as such by the MAP Growth test
Area Under the Curve (AUC)	Area under the receiver operating characteristics (ROC) curve	How well MAP Growth cut scores separate the study sample into proficiency categories that match those from the state test cut scores. An AUC at or above 0.80 is considered "good" accuracy.

Note. FP = false positives; FN = false negatives; TP = true positives; TN = true negatives.

2.5. Proficiency Projections

Given that all test scores contain measurement errors, reaching the Level 3 RIT cut does not guarantee that a student is proficient on the state test. Instead, it can be claimed that a student meeting the RIT cut score has a 50% chance of reaching proficiency (Level 3 or higher) on the state test, with their chances increasing the greater their score is from the cut. The proficiency projections indicate these probabilities for various RIT scores throughout the year.

In addition to calculating the MAP Growth fall and winter cut scores (and the projected grade 2 cut scores), the MAP Growth conditional growth norms data were also used to calculate the probability of reaching proficiency on the WA SBAC summative tests based on a student's RIT scores from fall, winter, and spring. The equation below was used to calculate the probability of a student achieving proficiency performance on the WA SBAC summative tests based on their fall or winter RIT score:

$$Pr(Achieving\ proficiency\ in\ spring|\ starting\ RIT) = \Phi\left(\frac{RIT_{previous} + g - RIT_{SpringCut}}{SD}\right)$$

where:
- Φ is a standardized normal cumulative distribution,
- $RIT_{previous}$ is the student's RIT score in fall or winter,
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT,
- $RIT_{SpringCut}$ is the MAP Growth Level 3 cut score for spring, and
- SD is the conditional standard deviation of the expected growth, g.

The equation below was used to estimate the probability of a student achieving proficiency performance on the WA SBAC summative tests based on their spring RIT score (RIT_{Spring}):

$$Pr(Achieving\ proficiency\ in\ spring\ |\ spring\ RIT) = \Phi\left(\frac{RIT_{Spring} - RIT_{SpringCut}}{SE}\right)$$

where SE is the standard error of measurement for MAP Growth.

3. Results

3.1. Study Sample

Only students who took both the MAP Growth and WA SBAC assessments in Spring 2019 were included in the study sample. Data used in this study were collected from 9 districts and 98 schools in Washington. Table 3.1 presents the demographic distributions of race, sex, and achievement level in the original unweighted study sample. Table 3.2 presents the distributions of the student population who took the Spring 2019 WA SBAC summative assessment. Since the unweighted data are different from the general WA SBAC population, post-stratification weights were applied to the linking study sample to improve its representativeness. Table 3.3 presents the demographic distributions of the sample after weighting, which are almost identical to the WA SBAC student population distributions. The analyses in this study were therefore conducted based on the weighted sample.

Table 3.1. Linking Study Sample Demographics (Unweighted)

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA/Reading							
	Total N	1,759	1,547	2,231	2,076	1,999	1,840
Race	AI/AN	0.6	0.6	0.9	1.3	0.7	1.0
	Asian	7.8	4.6	4.9	3.2	4.6	4.7
	Black	13.6	14.0	8.7	10.2	8.6	8.6
	Hispanic	25.1	28.1	19.3	19.2	19.4	18.5
	Mult-Race	13.8	12.6	10.6	9.7	9.2	8.5
	NH/PI	2.6	4.2	3.0	2.7	3.1	3.2
	White	36.4	35.9	52.6	53.6	54.5	55.4
Sex	Female	48.8	48.5	47.5	49.7	46.7	48.3
	Male	51.2	51.5	52.5	50.3	53.3	51.7
Achievement Level	Level 1	30.5	32.7	23.3	16.7	16.5	17.4
	Level 2	26.0	20.4	18.3	25.0	20.6	24.1
	Level 3	23.8	25.5	32.0	35.6	40.9	38.8
	Level 4	19.7	21.5	26.3	22.7	22.1	19.7
Mathematics							
	Total N	2,259	2,204	2,727	2,422	2,307	1,955
Race	AI/AN	0.5	0.6	0.7	1.2	0.5	0.9
	Asian	10.1	9.3	8.7	8.8	7.4	4.9
	Black	16.8	17.8	12.0	8.5	7.8	7.2
	Hispanic	24.9	26.8	20.4	19.4	18.4	18.4
	Multi-Race	13.5	12.0	10.4	9.4	9.6	8.5
	NH/PI	2.3	3.2	2.8	2.1	2.7	3.0
	White	32.0	30.3	45.1	50.6	53.6	57.1
Sex	Female	49.0	48.8	48.2	49.9	48.5	47.5
	Male	51.0	51.2	51.8	50.1	51.5	52.5
Achievement Level	Level 1	26.6	23.1	27.9	22.0	22.0	26.9
	Level 2	25.7	33.8	26.0	27.7	24.2	21.7

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
	Level 3	27.6	25.3	19.5	21.6	25.7	23.0
	Level 4	20.1	17.8	26.6	28.7	28.1	28.3

Note. AI/AN = American Indian/Alaska Native; NH/PI = Native Hawaiian or Other Pacific Islander.

Table 3.2. Spring 2019 WA SBAC Student Population Demographics

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA							
	Total N	82,565	85,084	86,609	85,884	83,264	81,204
Race	AI/AN	1.2	1.3	1.3	1.3	1.4	1.3
	Asian	7.7	7.6	7.8	7.6	7.6	8.1
	Black	4.2	4.3	4.3	4.3	4.4	4.3
	Hispanic	24.0	24.6	24.6	24.6	24.3	23.8
	Mult-Race	9.2	9.0	8.9	8.6	8.3	7.8
	NH/PI	1.1	1.1	1.1	1.2	1.1	1.2
	White	52.5	52.1	51.9	52.3	52.9	53.6
Sex	Female	48.9	49.0	49.0	48.7	49.8	48.5
	Male	51.1	51.0	51.0	51.3	50.2	51.5
Achievement Level	Level 1	22.0	24.5	21.1	19.6	18.6	18.4
	Level 2	21.6	17.7	17.6	22.6	19.5	22.0
	Level 3	23.8	23.8	31.3	34.3	37.5	37.1
	Level 4	32.6	33.9	30.1	23.5	24.4	22.4
Mathematics							
	Total N	82,644	85,147	86,625	85,915	83,298	81,215
Race	AI/AN	1.2	1.3	1.3	1.3	1.4	1.3
	Asian	7.8	7.6	7.8	7.7	7.6	8.1
	Black	4.2	4.3	4.3	4.3	4.4	4.3
	Hispanic	24.0	24.6	24.6	24.6	24.3	23.8
	Multi-Race	9.1	9.0	8.9	8.6	8.3	7.8
	NH/PI	1.1	1.1	1.1	1.2	1.1	1.2
	White	52.5	52.0	51.9	52.3	52.9	53.5
Sex	Female	48.9	49.0	49.0	48.7	48.6	48.5
	Male	51.1	51.0	51.0	51.3	51.4	51.5
Achievement Level	Level 1	20.5	18.3	25.9	26.2	25.5	30.3
	Level 2	20.4	26.8	25.1	26.2	24.7	22.5
	Level 3	29.2	27.7	19.3	21.2	22.9	19.4
	Level 4	29.8	27.2	29.7	26.5	26.9	27.8

Note. AI/AN = American Indian/Alaska Native; NH/PI = Native Hawaiian or Other Pacific Islander.

Table 3.3. Linking Study Sample Demographics (Weighted)

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA/Reading							
	Total N	1,759	1,547	2,231	2,076	1,999	1,840
Race	AI/AN	1.2	1.3	1.3	1.3	1.4	1.3
	Asian	7.7	7.6	7.8	7.6	7.6	8.1
	Black	4.2	4.3	4.3	4.3	4.4	4.3
	Hispanic	24.0	24.6	24.6	24.6	24.3	23.8
	Mult-Race	9.2	9.0	8.9	8.6	8.3	7.8
	NH/PI	1.1	1.1	1.1	1.2	1.1	1.2
	White	52.5	52.1	51.9	52.3	52.9	53.6
Sex	Female	48.9	49.0	49.0	48.7	49.8	48.5
	Male	51.1	51.0	51.0	51.3	50.2	51.5
Achievement Level	Level 1	22.0	24.5	21.1	19.6	18.6	18.4
	Level 2	21.6	17.8	17.6	22.6	19.5	22.0
	Level 3	23.8	23.8	31.3	34.3	37.5	37.1
	Level 4	32.6	33.9	30.1	23.5	24.4	22.4
Mathematics							
	Total N	2,259	2,204	2,727	2,422	2,307	1,955
Race	AI/AN	1.2	1.3	1.3	1.3	1.4	1.3
	Asian	7.8	7.6	7.8	7.7	7.6	8.1
	Black	4.2	4.3	4.3	4.3	4.4	4.3
	Hispanic	24.0	24.6	24.6	24.6	24.3	23.8
	Multi-Race	9.1	9.0	8.9	8.6	8.3	7.8
	NH/PI	1.1	1.1	1.1	1.2	1.1	1.2
	White	52.5	52.0	51.9	52.3	52.9	53.5
Sex	Female	48.9	49.0	49.0	48.7	48.6	48.5
	Male	51.1	51.0	51.0	51.3	51.4	51.5
Achievement Level	Level 1	20.5	18.3	25.9	26.2	25.5	30.3
	Level 2	20.4	26.8	25.1	26.2	24.7	22.5
	Level 3	29.2	27.7	19.3	21.2	22.9	19.4
	Level 4	29.8	27.2	29.7	26.5	26.9	27.8

Note. AI/AN = American Indian/Alaska Native; NH/PI = Native Hawaiian or Other Pacific Islander.

3.2. Descriptive Statistics

Table 3.4 presents descriptive statistics of the MAP Growth and WA SBAC test scores from Spring 2019, including the correlation coefficients (*r*) between them. The correlation coefficients between the scores range from 0.84 to 0.86 for ELA/reading and 0.88 to 0.92 for mathematics. These values indicate a strong relationship among the scores, which is important validity evidence for the claim that MAP Growth scores are good predictors of performance on the WA SBAC summative assessment.

Table 3.4. Descriptive Statistics of Test Scores

Grade	N	r	WA SBAC				MAP Growth			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
ELA/Reading										
3	1,759	0.85	2439.2	86.9	2176	2702	199.7	15.6	150	238
4	1,547	0.86	2483.6	95.5	2175	2745	207.0	15.2	150	241
5	2,231	0.85	2522.3	97.4	2142	2766	212.7	15.0	151	258
6	2,076	0.84	2542.3	96.9	2135	2819	216.5	15.4	162	256
7	1,999	0.85	2571.9	101.7	2206	2823	221.0	15.5	158	259
8	1,840	0.84	2583.0	101.9	2252	2832	224.4	15.7	161	270
Mathematics										
3	2,259	0.88	2450.0	85.6	2105	2730	201.6	14.3	142	249
4	2,204	0.90	2491.1	85.0	2090	2787	211.6	15.1	133	263
5	2,727	0.91	2519.1	96.1	2095	2805	219.7	17.9	147	277
6	2,422	0.91	2539.0	108.8	2103	2911	223.1	16.9	163	275
7	2,307	0.92	2559.4	111.8	2122	2910	229.0	17.9	158	285
8	1,955	0.91	2569.5	123.1	2149	2993	233.6	19.0	163	293

Note. SD = standard deviation; Min. = minimum; Max. = maximum.

3.3. MAP Growth Cut Scores

Table 3.5 and Table 3.6 present the WA SBAC scale score ranges and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. These tables can be used to predict a student's likely achievement level on the WA SBAC spring assessment when MAP Growth is taken in the fall, winter, or spring. For example, a grade 3 student who obtained a MAP Growth reading RIT score of 191 in the fall is likely to achieve Level 3 performance on the WA SBAC ELA test. A grade 3 student who obtained a MAP Growth reading RIT score of 196 in the winter is also likely to achieve Level 3 performance on the WA SBAC summative assessment. The winter cut score is higher than the fall cut score because growth is expected between fall and winter as students receive more instruction during the school year.

Within this report, the cut scores for fall and winter are derived from the spring cuts and the typical growth scores from fall-to-spring or winter-to-spring. The typical growth scores are based on the default instructional weeks most encountered for each term (Weeks 4, 20, and 32 for fall, winter, and spring, respectively). Since instructional weeks often vary by district, the cut scores in this report may differ slightly from the MAP Growth score reports that reflect instructional weeks set by partners. If the actual instructional weeks deviate from the default ones, a student's projected achievement level could be different from the generic projection presented in this document. Partners are therefore encouraged to use the projected achievement level in students' score reports since they reflect the specific instructional weeks set by partners.

Table 3.5. MAP Growth Cut Scores—ELA/Reading

WA SBAC ELA			
Grade	**Level 1**	**Level 2**	**Level 3**	**Level 4**
3	≤2366	2367–2431	**2432**–2489	≥2490
4	≤2415	2416–2472	**2473**–2532	≥2533
5	≤2441	2442–2501	**2502**–2581	≥2582
6	≤2456	2457–2530	**2531**–2617	≥2618
7	≤2478	2479–2551	**2552**–2648	≥2649
8	≤2486	2487–2566	**2567**–2667	≥2668

MAP Growth Reading							
Grade	**Level 1**		**Level 2**		**Level 3**		**Level 4**	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall								
2	100–159	1–27	160–175	28–63	**176**–190	64–88	191–350	89–99
3	100–176	1–33	177–190	34–62	**191**–201	63–82	202–350	83–99
4	100–190	1–38	191–201	39–62	**202**–210	63–79	211–350	80–99
5	100–195	1–32	196–204	33–52	**205**–218	53–80	219–350	81–99
6	100–199	1–29	200–212	30–59	**213**–225	60–83	226–350	84–99
7	100–203	1–30	204–216	31–60	**217**–229	61–84	230–350	85–99
8	100–207	1–32	208–220	33–61	**221**–234	62–86	235–350	87–99
Winter								
2	100–166	1–28	167–182	29–63	**183**–196	64–87	197–350	88–99
3	100–181	1–32	182–195	33–62	**196**–206	63–82	207–350	83–99
4	100–194	1–39	195–204	40–61	**205**–213	62–78	214–350	79–99
5	100–198	1–32	199–207	33–53	**208**–220	54–79	221–350	80–99
6	100–201	1–29	202–214	30–59	**215**–226	60–83	227–350	84–99
7	100–205	1–31	206–217	32–59	**218**–230	60–84	231–350	85–99
8	100–208	1–31	209–221	32–61	**222**–235	62–86	236–350	87–99
Spring								
2	100–172	1–30	173–186	31–61	**187**–199	62–84	200–350	85–99
3	100–186	1–34	187–198	35–60	**199**–208	61–79	209–350	80–99
4	100–197	1–40	198–206	41–60	**207**–214	61–76	215–350	77–99
5	100–201	1–35	202–209	36–53	**210**–221	54–78	222–350	79–99
6	100–203	1–30	204–215	31–58	**216**–227	59–82	228–350	83–99
7	100–207	1–33	208–218	34–59	**219**–231	60–83	232–350	84–99
8	100–210	1–34	211–222	35–61	**223**–236	62–86	237–350	87–99

Note. Cut scores for fall and winter are derived from the spring cuts and growth norms based on the typical instructional weeks. Spring cut scores for grade 2 were derived from the grade 3 cuts using the growth norms. Bold numbers indicate the cut scores considered to be at least proficient for accountability purposes.

Table 3.6. MAP Growth Cut Scores—Mathematics

Grade	Level 1		Level 2		Level 3		Level 4	
WA SBAC Mathematics								
3	≤2380		2381–2435		**2436**–2500		≥2501	
4	≤2410		2411–2484		**2485**–2548		≥2549	
5	≤2454		2455–2527		**2528**–2578		≥2579	
6	≤2472		2473–2551		**2552**–2609		≥2610	
7	≤2483		2484–2566		**2567**–2634		≥2635	
8	≤2503		2504–2585		**2586**–2652		≥2653	

MAP Growth Mathematics								
Grade	Level 1		Level 2		Level 3		Level 4	
	RIT	Percentile	RIT	Percentile	RIT	Percentile	RIT	Percentile
Fall								
2	100–161	1–23	162–175	24–57	**176**–189	58–86	190–350	87–99
3	100–176	1–32	177–186	33–57	**187**–197	58–81	198–350	82–99
4	100–188	1–30	189–202	31–64	**203**–214	65–86	215–350	87–99
5	100–200	1–36	201–214	37–70	**215**–223	71–85	224–350	86–99
6	100–205	1–39	206–217	40–68	**218**–226	69–84	227–350	85–99
7	100–211	1–37	212–225	38–69	**226**–235	70–85	236–350	86–99
8	100–220	1–47	221–233	48–73	**234**–243	74–87	244–350	88–99
Winter								
2	100–170	1–25	171–183	26–56	**184**–197	57–85	198–350	86–99
3	100–184	1–31	185–195	32–57	**196**–206	58–80	207–350	81–99
4	100–195	1–30	196–210	31–64	**211**–222	65–85	223–350	86–99
5	100–206	1–38	207–220	39–69	**221**–229	70–84	230–350	85–99
6	100–211	1–40	212–223	41–67	**224**–233	68–84	234–350	85–99
7	100–215	1–38	216–229	39–68	**230**–240	69–85	241–350	86–99
8	100–224	1–47	225–238	48–74	**239**–248	75–87	249–350	88–99
Spring								
2	100–177	1–27	178–189	28–55	**190**–202	56–82	203–350	83–99
3	100–191	1–33	192–201	34–56	**202**–212	57–78	213–350	79–99
4	100–201	1–32	202–215	33–62	**216**–227	63–83	228–350	84–99
5	100–210	1–38	211–224	39–68	**225**–233	69–83	234–350	84–99
6	100–215	1–40	216–227	41–65	**228**–237	66–82	238–350	83–99
7	100–218	1–39	219–232	40–67	**233**–242	68–83	243–350	84–99
8	100–227	1–47	228–240	48–72	**241**–250	73–85	251–350	86–99

Note. Cut scores for fall and winter are derived from the spring cuts and growth norms based on the typical instructional weeks. Spring cut scores for grade 2 were derived from the grade 3 cuts using the growth norms. Bold numbers indicate the cut scores considered to be at least proficient for accountability purposes.

3.4. Classification Accuracy

Table 3.7 presents the classification accuracy summary statistics, including the overall classification accuracy rates. These results indicate how well MAP Growth spring RIT scores predict proficiency on the WA SBAC summative tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rates range from 0.83 to 0.87 for ELA/reading and 0.87 to 0.89 for mathematics. These values suggest that the RIT cut scores are good at classifying students as proficient (Level 3 or higher) or not proficient (lower than Level 3) on the WA SBAC summative assessment.

Although the results show that MAP Growth scores can be used to accurately classify students as likely to be proficient on the WA SBAC summative tests, there is a notable limitation to how these results should be used and interpreted. The WA SBAC and MAP Growth assessments are designed for different purposes and measure slightly different constructs even within the same content area. Therefore, scores on the two tests cannot be assumed to be interchangeable. MAP Growth may not be used as a substitute for the state tests and vice versa.

Table 3.7. Classification Accuracy Results

Grade	N	Cut Score		Class. Accuracy	Rate		Sensitivity	Specificity	Precision	AUC
		MAP Growth	WA SBAC		FP	FN				
ELA/Reading										
3	1,759	199	2432	0.87	0.16	0.11	0.89	0.84	0.88	0.94
4	1,547	207	2473	0.85	0.17	0.14	0.86	0.83	0.87	0.93
5	2,231	210	2502	0.86	0.22	0.09	0.91	0.78	0.87	0.93
6	2,076	216	2531	0.83	0.20	0.14	0.86	0.80	0.85	0.92
7	1,999	219	2552	0.84	0.20	0.13	0.87	0.80	0.88	0.93
8	1,840	223	2567	0.84	0.21	0.13	0.87	0.79	0.86	0.92
Mathematics										
3	2,259	200	2436	0.87	0.19	0.10	0.90	0.81	0.87	0.94
4	2,204	211	2485	0.88	0.14	0.10	0.90	0.86	0.88	0.95
5	2,727	222	2528	0.88	0.12	0.12	0.88	0.88	0.87	0.95
6	2,422	225	2552	0.88	0.12	0.11	0.89	0.88	0.87	0.96
7	2,307	231	2567	0.89	0.10	0.13	0.87	0.90	0.89	0.96
8	1,955	237	2586	0.88	0.10	0.14	0.86	0.90	0.88	0.96

Note. Class. Accuracy = overall classification accuracy rate; FP = false positives; FN = false negatives; AUC = area under the ROC curve.

3.5. Proficiency Projections

Table 3.8 and Table 3.9 present the estimated probability of achieving proficiency (Level 3 or higher) performance on the WA SBAC summative tests based on RIT scores from fall, winter, or spring. "Prob." indicates the probability of obtaining proficiency status on the WA SBAC summative tests in the spring. For example, a grade 3 student who obtained a MAP Growth reading score of 200 in the fall has an 82% chance of reaching proficiency on the WA SBAC summative tests.

Table 3.8. Proficiency Projection Based on RIT Scores—ELA/Reading

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Level 3	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Level 3	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Level 3	Spring Projected Proficiency Prob.
2	5	187	142	No	<0.01	149	No	<0.01	153	No	<0.01
	10	187	148	No	<0.01	155	No	<0.01	159	No	<0.01
	15	187	152	No	0.01	159	No	0.01	164	No	<0.01
	20	187	156	No	0.03	162	No	0.02	167	No	<0.01
	25	187	159	No	0.05	165	No	0.03	170	No	<0.01
	30	187	161	No	0.07	168	No	0.06	173	No	<0.01
	35	187	163	No	0.11	170	No	0.09	175	No	<0.01
	40	187	166	No	0.16	172	No	0.14	177	No	<0.01
	45	187	168	No	0.22	175	No	0.2	180	No	0.02
	50	187	170	No	0.29	177	No	0.27	182	No	0.08
	55	187	172	No	0.33	179	No	0.36	184	No	0.2
	60	187	174	No	0.41	181	No	0.41	186	No	0.39
	65	187	177	Yes	0.54	183	Yes	0.5	188	Yes	0.61
	70	187	179	Yes	0.59	186	Yes	0.64	191	Yes	0.87
	75	187	182	Yes	0.71	188	Yes	0.73	193	Yes	0.96
	80	187	184	Yes	0.78	191	Yes	0.8	196	Yes	0.99
	85	187	188	Yes	0.87	194	Yes	0.89	200	Yes	>0.99
	90	187	192	Yes	0.94	199	Yes	0.95	204	Yes	>0.99
	95	187	198	Yes	0.98	205	Yes	0.99	210	Yes	>0.99
3	5	199	155	No	<0.01	160	No	<0.01	164	No	<0.01
	10	199	161	No	<0.01	167	No	<0.01	171	No	<0.01
	15	199	166	No	0.01	171	No	<0.01	175	No	<0.01
	20	199	169	No	0.02	175	No	0.02	179	No	<0.01
	25	199	172	No	0.04	178	No	0.03	182	No	<0.01
	30	199	175	No	0.06	180	No	0.05	184	No	<0.01
	35	199	178	No	0.11	183	No	0.09	187	No	<0.01
	40	199	180	No	0.16	185	No	0.12	189	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
				Projected Proficiency			Projected Proficiency			Projected Proficiency	
			Fall RIT	Level 3	Prob.	Winter RIT	Level 3	Prob.	Spring RIT	Level 3	Prob.
	45	199	182	No	0.18	188	No	0.2	192	No	0.02
	50	199	185	No	0.29	190	No	0.27	194	No	0.08
	55	199	187	No	0.37	192	No	0.36	196	No	0.2
	60	199	189	No	0.46	194	No	0.41	198	No	0.39
	65	199	192	Yes	0.54	197	Yes	0.55	201	Yes	0.72
	70	199	194	Yes	0.63	199	Yes	0.64	203	Yes	0.87
	75	199	197	Yes	0.71	202	Yes	0.76	206	Yes	0.98
	80	199	200	Yes	0.82	205	Yes	0.83	209	Yes	>0.99
	85	199	204	Yes	0.89	209	Yes	0.92	213	Yes	>0.99
	90	199	208	Yes	0.95	213	Yes	0.96	217	Yes	>0.99
	95	199	215	Yes	0.99	220	Yes	>0.99	224	Yes	>0.99
	5	207	166	No	<0.01	170	No	<0.01	173	No	<0.01
	10	207	173	No	<0.01	177	No	<0.01	179	No	<0.01
	15	207	177	No	0.01	181	No	<0.01	184	No	<0.01
	20	207	181	No	0.02	184	No	0.01	187	No	<0.01
	25	207	184	No	0.04	187	No	0.02	190	No	<0.01
	30	207	186	No	0.05	190	No	0.05	193	No	<0.01
	35	207	189	No	0.1	193	No	0.08	195	No	<0.01
	40	207	191	No	0.14	195	No	0.13	198	No	0.01
4	45	207	194	No	0.2	197	No	0.19	200	No	0.02
	50	207	196	No	0.28	199	No	0.27	202	No	0.08
	55	207	198	No	0.36	202	No	0.35	204	No	0.2
	60	207	200	No	0.45	204	No	0.45	207	Yes	0.5
	65	207	203	Yes	0.55	206	Yes	0.55	209	Yes	0.72
	70	207	205	Yes	0.64	209	Yes	0.69	211	Yes	0.87
	75	207	208	Yes	0.76	211	Yes	0.73	214	Yes	0.98
	80	207	211	Yes	0.83	214	Yes	0.84	217	Yes	>0.99
	85	207	215	Yes	0.92	218	Yes	0.93	220	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
				Fall			**Winter**			**Spring**	
			Fall RIT	**Projected Proficiency**		Winter RIT	**Projected Proficiency**		Spring RIT	**Projected Proficiency**	
				Level 3	Prob.		Level 3	Prob.		Level 3	Prob.
	90	207	219	Yes	0.96	222	Yes	0.98	225	Yes	>0.99
	95	207	226	Yes	0.99	229	Yes	>0.99	231	Yes	>0.99
5	5	210	175	No	<0.01	178	No	<0.01	180	No	<0.01
	10	210	181	No	0.01	184	No	<0.01	186	No	<0.01
	15	210	186	No	0.02	189	No	0.01	191	No	<0.01
	20	210	189	No	0.04	192	No	0.04	194	No	<0.01
	25	210	192	No	0.07	195	No	0.06	197	No	<0.01
	30	210	195	No	0.14	197	No	0.1	199	No	<0.01
	35	210	197	No	0.2	200	No	0.18	202	No	0.01
	40	210	199	No	0.23	202	No	0.26	204	No	0.04
	45	210	201	No	0.31	204	No	0.3	206	No	0.13
	50	210	204	No	0.45	206	No	0.4	208	No	0.28
	55	210	206	Yes	0.5	209	Yes	0.55	211	Yes	0.61
	60	210	208	Yes	0.6	211	Yes	0.6	213	Yes	0.8
	65	210	210	Yes	0.69	213	Yes	0.7	215	Yes	0.92
	70	210	213	Yes	0.77	215	Yes	0.78	217	Yes	0.98
	75	210	215	Yes	0.84	218	Yes	0.88	220	Yes	>0.99
	80	210	218	Yes	0.91	221	Yes	0.94	223	Yes	>0.99
	85	210	222	Yes	0.96	224	Yes	0.97	226	Yes	>0.99
	90	210	226	Yes	0.99	228	Yes	0.99	230	Yes	>0.99
	95	210	232	Yes	>0.99	235	Yes	>0.99	237	Yes	>0.99
6	5	216	181	No	<0.01	183	No	<0.01	185	No	<0.01
	10	216	187	No	<0.01	189	No	<0.01	191	No	<0.01
	15	216	191	No	0.01	193	No	0.01	195	No	<0.01
	20	216	195	No	0.03	197	No	0.02	198	No	<0.01
	25	216	198	No	0.06	199	No	0.04	201	No	<0.01
	30	216	200	No	0.07	202	No	0.06	203	No	<0.01
	35	216	202	No	0.11	204	No	0.1	206	No	<0.01

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Level 3	Prob.	Winter RIT	Winter Projected Proficiency Level 3	Prob.	Spring RIT	Spring Projected Proficiency Level 3	Prob.
	40	216	205	No	0.2	206	No	0.16	208	No	0.01
	45	216	207	No	0.23	209	No	0.26	210	No	0.04
	50	216	209	No	0.31	211	No	0.31	212	No	0.13
	55	216	211	No	0.4	213	No	0.4	214	No	0.28
	60	216	213	Yes	0.5	215	Yes	0.5	216	Yes	0.5
	65	216	215	Yes	0.55	217	Yes	0.6	218	Yes	0.72
	70	216	218	Yes	0.69	219	Yes	0.69	221	Yes	0.92
	75	216	220	Yes	0.77	222	Yes	0.81	223	Yes	0.98
	80	216	223	Yes	0.86	225	Yes	0.9	226	Yes	>0.99
	85	216	226	Yes	0.93	228	Yes	0.95	229	Yes	>0.99
	90	216	231	Yes	0.98	232	Yes	0.98	233	Yes	>0.99
	95	216	237	Yes	>0.99	238	Yes	>0.99	239	Yes	>0.99
7	5	219	185	No	<0.01	186	No	<0.01	187	No	<0.01
	10	219	191	No	<0.01	192	No	<0.01	193	No	<0.01
	15	219	195	No	0.01	196	No	0.01	197	No	<0.01
	20	219	198	No	0.02	200	No	0.03	201	No	<0.01
	25	219	201	No	0.05	202	No	0.03	203	No	<0.01
	30	219	204	No	0.1	205	No	0.07	206	No	<0.01
	35	219	206	No	0.12	207	No	0.11	208	No	<0.01
	40	219	208	No	0.18	210	No	0.2	211	No	0.01
	45	219	210	No	0.24	212	No	0.23	213	No	0.04
	50	219	212	No	0.32	214	No	0.31	215	No	0.13
	55	219	214	No	0.36	216	No	0.4	217	No	0.28
	60	219	217	Yes	0.5	218	Yes	0.5	219	Yes	0.5
	65	219	219	Yes	0.59	220	Yes	0.6	221	Yes	0.72
	70	219	221	Yes	0.68	223	Yes	0.73	224	Yes	0.92
	75	219	224	Yes	0.79	225	Yes	0.8	226	Yes	0.98
	80	219	226	Yes	0.85	228	Yes	0.89	229	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 3	Prob.		Level 3	Prob.		Level 3	Prob.
	85	219	230	Yes	0.94	231	Yes	0.94	232	Yes	>0.99
	90	219	234	Yes	0.98	235	Yes	0.98	237	Yes	>0.99
	95	219	240	Yes	>0.99	241	Yes	>0.99	243	Yes	>0.99
	5	223	188	No	<0.01	189	No	<0.01	190	No	<0.01
	10	223	194	No	<0.01	195	No	<0.01	196	No	<0.01
	15	223	198	No	0.01	199	No	0.01	200	No	<0.01
	20	223	201	No	0.02	203	No	0.02	203	No	<0.01
	25	223	204	No	0.04	205	No	0.03	206	No	<0.01
	30	223	207	No	0.07	208	No	0.06	209	No	<0.01
	35	223	209	No	0.11	210	No	0.1	211	No	<0.01
	40	223	211	No	0.15	213	No	0.14	213	No	<0.01
	45	223	214	No	0.21	215	No	0.2	216	No	0.02
8	50	223	216	No	0.29	217	No	0.28	218	No	0.08
	55	223	218	No	0.37	219	No	0.36	220	No	0.2
	60	223	220	No	0.45	221	No	0.45	222	No	0.39
	65	223	222	Yes	0.55	223	Yes	0.55	224	Yes	0.61
	70	223	225	Yes	0.67	226	Yes	0.68	227	Yes	0.87
	75	223	227	Yes	0.75	228	Yes	0.76	229	Yes	0.96
	80	223	230	Yes	0.85	231	Yes	0.86	232	Yes	0.99
	85	223	233	Yes	0.91	235	Yes	0.94	236	Yes	>0.99
	90	223	238	Yes	0.97	239	Yes	0.98	240	Yes	>0.99
	95	223	244	Yes	>0.99	245	Yes	>0.99	246	Yes	>0.99

Table 3.9. Proficiency Projection Based on RIT Scores—Mathematics

Grade	Start Percentile	Spring Cut	Fall RIT	Fall Projected Proficiency Level 3	Fall Projected Proficiency Prob.	Winter RIT	Winter Projected Proficiency Level 3	Winter Projected Proficiency Prob.	Spring RIT	Spring Projected Proficiency Level 3	Spring Projected Proficiency Prob.
	5	190	147	No	<0.01	155	No	<0.01	161	No	<0.01
	10	190	153	No	0.01	161	No	<0.01	167	No	<0.01
	15	190	157	No	0.02	165	No	0.01	171	No	<0.01
	20	190	160	No	0.04	168	No	0.03	174	No	<0.01
	25	190	162	No	0.07	171	No	0.06	177	No	<0.01
	30	190	165	No	0.11	173	No	0.09	179	No	<0.01
	35	190	167	No	0.16	175	No	0.14	181	No	0.01
	40	190	169	No	0.23	177	No	0.21	183	No	0.02
	45	190	171	No	0.31	179	No	0.25	185	No	0.08
2	50	190	173	No	0.4	181	No	0.35	187	No	0.2
	55	190	175	No	0.45	183	No	0.45	189	No	0.39
	60	190	177	Yes	0.55	185	Yes	0.55	192	Yes	0.72
	65	190	179	Yes	0.64	187	Yes	0.65	194	Yes	0.87
	70	190	181	Yes	0.73	189	Yes	0.7	196	Yes	0.96
	75	190	183	Yes	0.8	192	Yes	0.82	198	Yes	0.99
	80	190	186	Yes	0.86	194	Yes	0.88	201	Yes	>0.99
	85	190	189	Yes	0.93	197	Yes	0.94	204	Yes	>0.99
	90	190	193	Yes	0.97	201	Yes	0.98	208	Yes	>0.99
	95	190	198	Yes	0.99	207	Yes	>0.99	214	Yes	>0.99
	5	202	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	202	164	No	<0.01	172	No	<0.01	177	No	<0.01
	15	202	168	No	0.01	176	No	<0.01	181	No	<0.01
3	20	202	171	No	0.02	179	No	0.01	185	No	<0.01
	25	202	174	No	0.05	182	No	0.04	188	No	<0.01
	30	202	176	No	0.08	184	No	0.06	190	No	<0.01
	35	202	178	No	0.13	186	No	0.11	193	No	0.01
	40	202	180	No	0.19	189	No	0.2	195	No	0.02

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 3	Prob.		Level 3	Prob.		Level 3	Prob.
	45	202	182	No	0.26	191	No	0.29	197	No	0.08
	50	202	184	No	0.35	193	No	0.34	199	No	0.2
	55	202	186	No	0.45	195	No	0.45	201	No	0.39
	60	202	188	Yes	0.55	197	Yes	0.55	203	Yes	0.61
	65	202	190	Yes	0.65	199	Yes	0.66	206	Yes	0.87
	70	202	192	Yes	0.74	201	Yes	0.76	208	Yes	0.96
	75	202	195	Yes	0.85	204	Yes	0.87	211	Yes	0.99
	80	202	197	Yes	0.9	206	Yes	0.92	213	Yes	>0.99
	85	202	200	Yes	0.95	210	Yes	0.96	217	Yes	>0.99
	90	202	204	Yes	0.99	214	Yes	0.99	221	Yes	>0.99
	95	202	210	Yes	>0.99	220	Yes	>0.99	227	Yes	>0.99
4	5	216	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	216	177	No	<0.01	183	No	<0.01	187	No	<0.01
	15	216	181	No	<0.01	187	No	<0.01	191	No	<0.01
	20	216	184	No	0.01	190	No	<0.01	195	No	<0.01
	25	216	186	No	0.02	193	No	0.01	198	No	<0.01
	30	216	189	No	0.04	196	No	0.02	201	No	<0.01
	35	216	191	No	0.07	198	No	0.04	203	No	<0.01
	40	216	193	No	0.11	200	No	0.08	206	No	<0.01
	45	216	195	No	0.16	202	No	0.13	208	No	0.01
	50	216	197	No	0.23	204	No	0.2	210	No	0.04
	55	216	199	No	0.31	207	No	0.33	212	No	0.13
	60	216	201	No	0.4	209	No	0.39	215	No	0.39
	65	216	203	Yes	0.5	211	Yes	0.5	217	Yes	0.61
	70	216	205	Yes	0.6	213	Yes	0.61	220	Yes	0.87
	75	216	208	Yes	0.73	216	Yes	0.76	222	Yes	0.96
	80	216	210	Yes	0.81	219	Yes	0.87	225	Yes	0.99
	85	216	214	Yes	0.91	222	Yes	0.94	229	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	**Projected Proficiency**		**Winter RIT**	**Projected Proficiency**		**Spring RIT**	**Projected Proficiency**	
				Level 3	**Prob.**		**Level 3**	**Prob.**		**Level 3**	**Prob.**
	90	216	217	Yes	0.96	226	Yes	0.98	233	Yes	>0.99
	95	216	223	Yes	0.99	232	Yes	>0.99	240	Yes	>0.99
5	5	225	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	225	185	No	<0.01	189	No	<0.01	192	No	<0.01
	15	225	189	No	<0.01	194	No	<0.01	197	No	<0.01
	20	225	193	No	<0.01	197	No	<0.01	200	No	<0.01
	25	225	195	No	<0.01	200	No	<0.01	204	No	<0.01
	30	225	198	No	0.01	203	No	0.01	206	No	<0.01
	35	225	200	No	0.03	205	No	0.01	209	No	<0.01
	40	225	202	No	0.05	207	No	0.02	211	No	<0.01
	45	225	204	No	0.08	210	No	0.06	214	No	<0.01
	50	225	206	No	0.12	212	No	0.1	216	No	0.01
	55	225	208	No	0.19	214	No	0.16	218	No	0.02
	60	225	210	No	0.26	216	No	0.24	221	No	0.13
	65	225	212	No	0.35	219	No	0.39	223	No	0.28
	70	225	215	Yes	0.5	221	Yes	0.5	226	Yes	0.61
	75	225	217	Yes	0.6	224	Yes	0.67	228	Yes	0.8
	80	225	220	Yes	0.74	226	Yes	0.76	232	Yes	0.98
	85	225	223	Yes	0.85	230	Yes	0.9	235	Yes	>0.99
	90	225	227	Yes	0.94	234	Yes	0.97	240	Yes	>0.99
	95	225	233	Yes	0.99	240	Yes	>0.99	246	Yes	>0.99
6	5	228	184	No	<0.01	187	No	<0.01	190	No	<0.01
	10	228	190	No	<0.01	194	No	<0.01	197	No	<0.01
	15	228	194	No	<0.01	198	No	<0.01	201	No	<0.01
	20	228	197	No	<0.01	201	No	<0.01	205	No	<0.01
	25	228	199	No	0.01	204	No	<0.01	208	No	<0.01
	30	228	202	No	0.02	207	No	0.01	211	No	<0.01
	35	228	204	No	0.04	209	No	0.02	213	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
				Fall			**Winter**			**Spring**	
			Fall RIT	**Projected Proficiency**		**Winter RIT**	**Projected Proficiency**		**Spring RIT**	**Projected Proficiency**	
				Level 3	**Prob.**		**Level 3**	**Prob.**		**Level 3**	**Prob.**
	40	228	206	No	0.07	212	No	0.05	216	No	<0.01
	45	228	208	No	0.11	214	No	0.09	218	No	<0.01
	50	228	210	No	0.16	216	No	0.14	220	No	0.01
	55	228	212	No	0.23	218	No	0.21	223	No	0.08
	60	228	214	No	0.31	220	No	0.29	225	No	0.2
	65	228	216	No	0.4	223	No	0.45	227	No	0.39
	70	228	219	Yes	0.55	225	Yes	0.55	230	Yes	0.72
	75	228	221	Yes	0.69	228	Yes	0.71	233	Yes	0.92
	80	228	224	Yes	0.81	231	Yes	0.83	236	Yes	0.99
	85	228	227	Yes	0.89	234	Yes	0.91	239	Yes	>0.99
	90	228	231	Yes	0.96	238	Yes	0.97	244	Yes	>0.99
	95	228	237	Yes	0.99	245	Yes	>0.99	251	Yes	>0.99
7	5	233	189	No	<0.01	191	No	<0.01	192	No	<0.01
	10	233	195	No	<0.01	197	No	<0.01	199	No	<0.01
	15	233	199	No	<0.01	202	No	<0.01	204	No	<0.01
	20	233	203	No	<0.01	206	No	<0.01	208	No	<0.01
	25	233	206	No	0.01	209	No	<0.01	211	No	<0.01
	30	233	208	No	0.01	211	No	0.01	214	No	<0.01
	35	233	211	No	0.03	214	No	0.02	216	No	<0.01
	40	233	213	No	0.06	216	No	0.03	219	No	<0.01
	45	233	215	No	0.09	219	No	0.07	221	No	<0.01
	50	233	217	No	0.14	221	No	0.12	224	No	0.01
	55	233	219	No	0.2	223	No	0.18	226	No	0.02
	60	233	222	No	0.31	226	No	0.3	229	No	0.13
	65	233	224	No	0.4	228	No	0.4	231	No	0.28
	70	233	226	Yes	0.5	231	Yes	0.5	234	Yes	0.61
	75	233	229	Yes	0.64	233	Yes	0.6	237	Yes	0.87
	80	233	232	Yes	0.77	236	Yes	0.74	240	Yes	0.98

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Level 3	Prob.		Level 3	Prob.		Level 3	Prob.
	85	233	235	Yes	0.86	240	Yes	0.88	244	Yes	>0.99
	90	233	239	Yes	0.94	245	Yes	0.97	249	Yes	>0.99
	95	233	246	Yes	0.99	251	Yes	>0.99	256	Yes	>0.99
8	5	241	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	241	199	No	<0.01	201	No	<0.01	203	No	<0.01
	15	241	203	No	<0.01	206	No	<0.01	208	No	<0.01
	20	241	207	No	<0.01	210	No	<0.01	212	No	<0.01
	25	241	210	No	<0.01	213	No	<0.01	215	No	<0.01
	30	241	212	No	0.01	216	No	<0.01	218	No	<0.01
	35	241	215	No	0.01	219	No	0.01	221	No	<0.01
	40	241	217	No	0.03	221	No	0.02	224	No	<0.01
	45	241	220	No	0.05	224	No	0.04	226	No	<0.01
	50	241	222	No	0.08	226	No	0.07	229	No	<0.01
	55	241	224	No	0.13	228	No	0.1	231	No	<0.01
	60	241	227	No	0.21	231	No	0.19	234	No	0.02
	65	241	229	No	0.28	233	No	0.26	237	No	0.13
	70	241	232	No	0.41	236	No	0.4	239	No	0.28
	75	241	234	Yes	0.5	239	Yes	0.5	242	Yes	0.61
	80	241	237	Yes	0.63	242	Yes	0.65	246	Yes	0.92
	85	241	241	Yes	0.79	246	Yes	0.81	250	Yes	0.99
	90	241	246	Yes	0.92	251	Yes	0.93	255	Yes	>0.99
	95	241	252	Yes	0.98	258	Yes	0.99	262	Yes	>0.99

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