Predicting Performance on the North Carolina End-of-Grade (NC EOG) Assessments Based on NWEA MAP Growth Scores

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NWEA Psychometrics and Analytics

Linking Study Updates

Date	Description
2014-03	Initial linking study conducted for North Carolina in reading and mathematics grades 3–8 using Spring 2013 data.
2016-03	Incorporated the 2015 MAP Growth norms using Spring 2013 data.
2020-12-23	Incorporated the 2020 MAP Growth norms using Spring 2019 data for the updated NC EOG mathematics assessments in grades 3–8.
2021-11-30	Incorporated the 2020 MAP Growth norms using Spring 2021 data for the updated NC EOG reading assessments in grades 3–8. The mathematics results from December 2020 remain the same but are included in this report so all up-to-date NC EOG linking study results are in one place. Projection tables have also been added for both reading and mathematics to reflect Level 4 college-and-career readiness. Not enough data available to include science.
2025-07	Updated the linking study based on the 2025 norms.

Acknowledgements: This report was made possible with the contributions of Yan Zhou, Ann Hu, Justin Schreiber, Christopher Wells, and Derek May. We appreciate our colleagues at NWEA and all our partners who provided data for the study.

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Executive Summary

To predict student achievement on the North Carolina End-of-Grade (NC EOG) assessments in grades 3–8, NWEA® conducted a linking study using Spring 2021 data for reading and Spring 2019 data for mathematics to derive Rasch Unit (RIT) cut scores on the MAP® Growth™ assessments that correspond to the NC EOG achievement levels. Educators can use this information to identify students at risk of not meeting state proficiency standards early in the year and provide tailored educational interventions. The linking study has been updated since the previous version to incorporate the most recent 2025 NWEA MAP Growth norms (NWEA, 2025).

Table E.1 presents the NC EOG 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 test and those who are not. For example, the Level 3 cut score on the NC EOG grade 3 reading test is 540. A grade 3 student with a MAP Growth reading RIT score of 196 in the fall is likely to meet proficiency on the NC EOG reading test in the spring, whereas a grade 3 student with a MAP Growth reading RIT score lower than 196 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 NC EOG test by grade 3. These cut scores were derived based on the grade 3 cuts and the 2025 NWEA growth norms for the adjacent grade (e.g., grades 2 to 3).

Table E.1. MAP Growth Cut Scores for NC EOG Proficiency

Assessment		Level 3 Cut Scores by Grade						
		2	3	4	5	6	7	8
Reading								
NC EOG Spring		–	540	544	550	552	554	557
MAP Growth	Fall	183	196	204	212	217	219	222
	Winter	189	201	207	215	218	220	223
	Spring	193	204	209	216	219	221	224
Mathematics								
NC EOG Spring		–	545	547	546	546	546	543
MAP Growth	Fall	173	185	204	212	215	223	231
	Winter	182	194	212	218	221	227	235
	Spring	188	200	217	222	225	230	238

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 NC EOG grades 3–8 reading and mathematics tests are North Carolina's state summative assessments aligned to the North Carolina Standard Course of Study (NCSCOS). They were first implemented operationally in Spring 2019 for mathematics and in Spring 2021 for reading.

Based on their test scores, students are placed into one of four achievement levels: *Not Proficient*, Level 3, Level 4, and Level 5. Students are considered college-and-career ready if they score at a Level 4 or Level 5. A Level 3 score indicates that the student meets on-grade proficiency 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 to 350.

E.2. Linking Methods

The equipercentile linking method was used to produce the RIT cut scores for the spring administration that correspond to performance levels on the NC EOG summative assessments for every subject and grade. 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 NC EOG assessments in Spring 2021 for reading or Spring 2019 for mathematics were included in the study sample. Table E.2 presents the numbers of North Carolina students from 6 districts and 211 schools for reading and 9 districts and 203 schools for mathematics 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 be different from the general student population in important characteristics. To ensure that the linking study sample represents the state student population in terms of race, sex, and achievement level distributions, post-stratification weighting was applied to statistically adjust the sample so that it reflects the target population on these variables. 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.

[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.

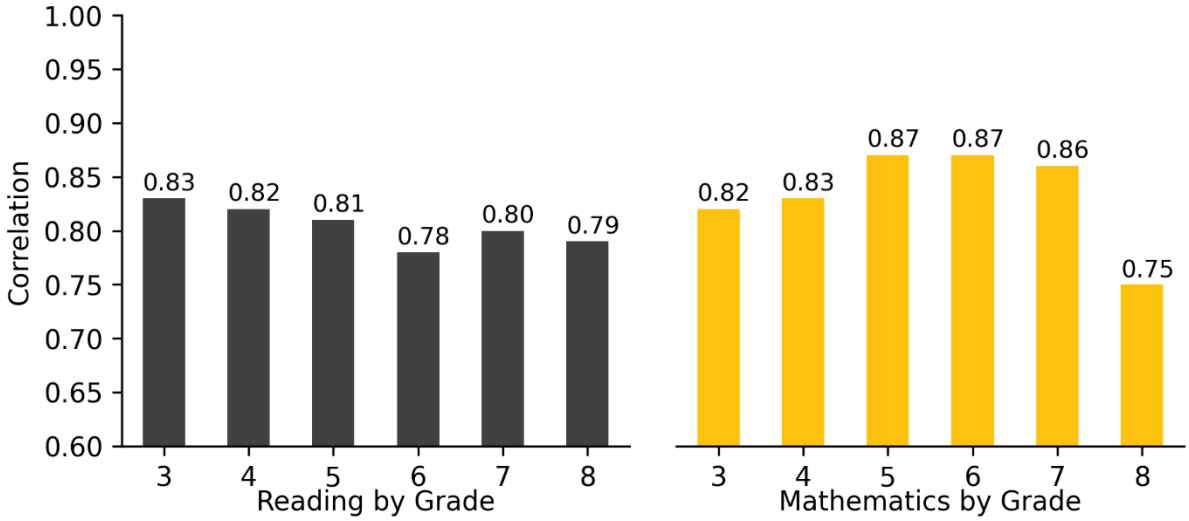
Table E.2. Linking Study Sample

Grade	# Students	
	Reading	Mathematics
3	10,979	15,269
4	13,132	15,873
5	13,193	15,825
6	12,146	14,973
7	12,108	14,255
8	11,581	9,011

E.4. Test Score Relationships

Correlations between MAP Growth RIT scores and NC EOG scores range from 0.75 to 0.87 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 NC EOG assessments.

Figure E.1. Correlations Between MAP Growth and NC EOG Test Scores

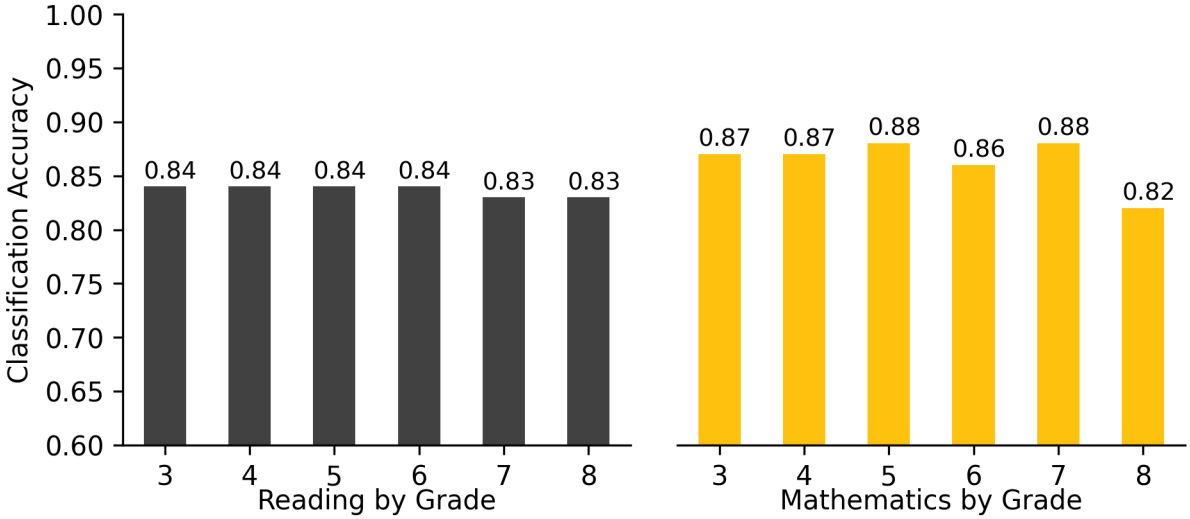


E.5. Accuracy of MAP Growth Classifications

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 NC EOG tests.[2] For example, the MAP Growth reading grade 3 Level 3 cut score has a 0.84 accuracy rate, meaning it accurately classified student achievement on the state test for 84% of the sample. The results range from 0.82 to 0.88 across content areas, indicating that RIT scores have a high accuracy rate of identifying student proficiency on the NC EOG tests.

[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 North Carolina End-of-Grade (NC EOG) assessments in grades 3–8 with Rasch Unit (RIT) scores from the MAP Growth assessments taken during the Spring 2021 term for reading and the Spring 2019 term for mathematics. MAP Growth cut scores are also included for grade 2 so that educators can track early learners' progress toward proficiency on the NC EOG test by grade 3. Specifically, this report presents the following results:

1. Student sample demographics
2. Descriptive statistics of test scores
3. MAP Growth cut scores from fall, winter, and spring that correspond to the achievement levels on the spring NC EOG assessment
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency (Level 3 or higher) status on the NC EOG tests
5. The probability of achieving proficiency performance on the NC EOG assessment based on MAP Growth RIT scores from fall, winter, and spring

1.2. Assessment Overview

The NC EOG summative assessments are aligned to the North Carolina Standard Course of Study (NCSCOS) and were first implemented operationally in Spring 2019 for mathematics and in Spring 2021 for reading. Each assessment has three cut scores that distinguish between the following achievement levels: *Not Proficient*, Level 3, Level 4, and Level 5. The Level 3 cut score demarks the minimum level of performance considered to be proficient for accountability purposes. Students are considered college-and-career ready if they score at a Level 4 or Level 5.

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 to 350. To aid the interpretation of scores, NWEA conducts norming studies of student and school performance on MAP Growth. Achievement status norms show how well a student performed on MAP Growth compared with students in the norming group. It does this by associating the student's 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 2021 and Spring 2019 administrations of the MAP Growth and NC EOG reading and mathematics assessments, respectively. NWEA requested that North Carolina 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 North Carolina state score information was available to NWEA, each student's state testing record was matched to their MAP Growth score based on 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 NC EOG assessments in Spring 2021 for reading or Spring 2019 for mathematics 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's test-taking student population in terms of race, sex, and achievement level. These variables were selected because they are known to be correlated with students' academic achievement and are often available in state summative assessment reports. The weighted sample will match the target population as closely as possible for the key demographics and performance characteristics defined by the state.

A raking procedure was used to calculate the post-stratification weights that either compensate for the underrepresentation of certain groups or attenuate the overrepresentation of certain groups. 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

MAP Growth cut scores that predict student achievement on the NC EOG assessments are reported for grades 3–8, as well as for grade 2 so that educators can track early learners' progress toward proficiency (Level 3 or higher) on the NC EOG test by grade 3. Percentile ranks based on the 2025 NWEA norms are also provided. These are useful for understanding how students' scores compare with peers nationwide and the relative rigor of a state's achievement level designations for its summative assessment.

The equipercentile linking method (Kolen & Brennan, 2004) was used to identify the spring MAP Growth RIT scores for grades 3–8 that correspond to the spring NC EOG achievement level cut scores. 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., NC EOG). 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 NC EOG tests on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on the NC EOG 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 was used to calculate the fall and winter cut scores for grades 3–8. The equation below was used to determine the previous term'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 RIT score, and
- g is the expected growth from the previous RIT (e.g., fall or winter) to the spring RIT score.

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 NC EOG tests can be described using classification accuracy statistics based on the MAP Growth spring RIT cut scores. The results 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 NC EOG test. Table 2.1 describes the classification accuracy statistics provided in this report (Pommerich et al., 2004).

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 (Level 3 or higher) on the NC EOG test based on a student's RIT scores from fall, winter, and spring. The same method was also used to calculate the probability of reaching college-and-career readiness status (Level 4 or higher) on the NC EOG test. The equation below was used to calculate the probability of a student achieving proficiency for accountability purposes or college-and-career readiness achievement on the NC EOG test based on their fall or winter RIT score:

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

where:

- Φ is the standard normal cumulative distribution function,
- $RIT_{previous}$ 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 or Level 4 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 (Level 3 or higher) for accountability purposes or college-and-career readiness (Level 4 or higher) achievement on the NC EOG test based on their spring RIT score (RIT_{Spring}):

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

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 NC EOG assessments in either Spring 2021 for reading or Spring 2019 for mathematics were included in the study sample. Data used in this study were collected from 6 districts and 211 schools for reading and 9 districts and 203 schools for mathematics in North Carolina. 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 target population of students who took the Spring 2019 or Spring 2021 NC EOG tests. Since the original study sample is different from the target NC EOG 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 NC EOG student population distributions. The analyses in this study were conducted using the weighted sample.

Table 3.1. Linking Study Sample Demographics (Unweighted)

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Reading							
	Total N	10,979	13,132	13,193	12,146	12,108	11,581
Race	American Indian	0.1	0.2	0.2	0.2	0.2	0.2
	Asian	6.2	6.4	6.3	6.4	5.9	5.9
	Black	31.1	29.6	29.5	29.0	28.8	28.7
	Hispanic	30.4	27.4	26.9	28.1	27.2	26.7
	Multi-Race	3.3	4.0	3.5	2.7	2.9	3.0
	White	28.9	32.3	33.6	33.5	35.0	35.5
Sex	Female	48.5	49.6	49.1	49.1	49.7	49.9
	Male	51.5	50.4	50.9	50.9	50.3	50.1
Achievement Level	*Not Proficient*	71.0	56.8	56.9	54.0	51.9	49.2
	Level 3	9.1	13.7	13.0	21.6	16.8	20.3
	Level 4	12.2	21.5	18.6	18.9	19.7	23.5
	Level 5	7.7	8.0	11.5	5.4	11.6	7.0
Mathematics							
	Total N	15,269	15,857	15,825	14,958	14,255	9,011
Race	American Indian	0.3	0.3	0.3	0.3	0.2	0.4
	Asian	6.0	5.9	5.1	5.0	5.1	2.3
	Black	30.6	31.0	31.8	31.1	30.6	38.1
	Hispanic	24.8	25.9	25.6	25.2	24.0	27.3
	Multi-Race	0.2	0.1	0.2	0.1	0.1	0.1
	Native Hawaiian/ Pacific Islander	3.4	2.9	2.7	3.1	3.0	2.8
	White	34.7	33.9	34.4	35.2	36.9	29.0
Sex	Female	49.2	48.7	49.4	49.0	49.0	48.4
	Male	50.8	51.3	50.6	51.0	51.0	51.6

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Achievement Level	*Not Proficient*	32.3	38.7	35.9	38.2	38.4	64.7
	Level 3	19.0	17.6	17.7	16.7	13.2	15.1
	Level 4	32.4	27.1	31.6	30.1	31.7	14.3
	Level 5	16.3	16.6	14.8	15.0	16.8	5.8

Note. The race categories reflect the NC EOG performance reports from each testing term. As such, the categories for reading based on Spring 2021 data differ slightly from those reported for mathematics based on Spring 2019 data.

Table 3.2. NC EOG Student Population Demographics

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Reading (Spring 2021)							
	Total N	106,914	107,563	108,784	112,085	113,042	113,687
Race	American Indian	1.1	1.1	1.1	1.2	1.1	1.2
	Asian	3.9	3.9	3.8	3.7	3.5	3.5
	Black	24.3	24.4	24.6	24.9	25.0	24.3
	Hispanic	20.1	19.8	20.4	20.2	20.0	20.1
	Multi-Race	5.4	5.4	5.1	4.9	4.9	4.7
	White	44.7	44.7	45.1	44.8	45.5	46.3
Sex	Female	48.8	48.7	48.8	48.4	48.7	48.6
	Male	51.2	50.8	51.2	51.6	51.3	51.4
Achievement Level	*Not Proficient*	56.0	54.9	57.6	54.7	53.3	51.8
	Level 3	18.7	14.2	13.6	21.7	17.2	20.9
	Level 4	15.2	22.4	17.9	18.2	19.1	21.5
	Level 5	10.1	8.5	10.9	5.4	10.4	5.8
Mathematics (Spring 2019)							
	Total N	116,059	120,320	121,935	121,613	118,471	80,897
Race	American Indian	1.1	1.2	1.1	1.2	1.1	1.3
	Asian	3.8	3.6	3.4	3.4	3.4	1.7
	Black	25.1	25.6	25.3	25.0	25.0	29.0
	Hispanic	19.3	19.2	19.2	19.4	18.8	20.6
	Multi-Race	4.7	4.5	4.7	4.6	4.5	4.4
	Native Hawaiian/ Pacific Islander	0.2	0.2	0.1	0.1	0.1	0.1
	White	45.8	45.8	46.1	46.4	47.1	42.9
Sex	Female	48.9	48.6	48.9	48.7	48.9	47.7
	Male	51.1	51.4	51.1	51.3	51.1	52.3
Achievement Level	*Not Proficient*	35.5	42.5	39.5	41.0	41.5	64.3
	Level 3	20.0	17.6	18.2	17.2	13.9	16.0
	Level 4	30.7	25.4	30.8	29.8	31.5	14.0
	Level 5	13.8	14.6	11.5	12.1	13.1	5.7

Note. The race categories reflect the NC EOG performance reports from each testing term. As such, the categories for reading based on Spring 2021 data differ slightly from those reported for mathematics based on Spring 2019 data.

Table 3.3. Linking Study Sample Demographics (Weighted)

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
Reading							
	Total N	10,979	13,132	13,193	12,146	12,108	11,581
Race	American Indian	1.1	1.1	1.1	1.2	1.1	1.2
	Asian	3.9	3.9	3.8	3.7	3.5	3.5
	Black	24.4	24.6	24.6	25.0	25.0	24.3
	Hispanic	20.2	20.0	20.4	20.3	20.1	20.1
	Multi-Race	5.5	5.4	5.1	4.9	4.9	4.7
	White	44.9	45.1	45.1	45.0	45.6	46.3
Sex	Female	48.8	48.9	48.8	48.4	48.7	48.6
	Male	51.2	51.1	51.2	51.6	51.3	51.4
Achievement Level	*Not Proficient*	56.0	54.9	57.6	54.7	53.3	51.8
	Level 3	18.7	14.2	13.6	21.7	17.2	20.9
	Level 4	15.2	22.4	17.9	18.2	19.1	21.5
	Level 5	10.1	8.5	10.9	5.4	10.4	5.8
Mathematics							
	Total N	15,269	15,873	15,825	14,973	14,255	9,011
Race	American Indian	1.1	1.2	1.1	1.2	1.1	1.3
	Asian	3.8	3.6	3.4	3.4	3.4	1.7
	Black	25.1	25.6	25.3	25.0	25.0	29.0
	Hispanic	19.3	19.2	19.2	19.4	18.8	20.6
	Multi-Race	4.7	4.5	4.7	4.6	4.5	4.4
	Native Hawaiian/ Pacific Islander	0.2	0.2	0.1	0.1	0.1	0.1
	White	45.8	45.8	46.1	46.4	47.1	42.9
Sex	Female	48.9	48.6	48.9	48.7	48.9	47.7
	Male	51.1	51.4	51.1	51.3	51.1	52.3
Achievement Level	*Not Proficient*	35.5	42.5	39.5	41.0	41.5	64.3
	Level 3	20.0	17.6	18.2	17.2	13.9	16.0
	Level 4	30.7	25.4	30.8	29.8	31.5	14.0
	Level 5	13.8	14.6	11.5	12.1	13.1	5.7

Note. The race categories reflect the NC EOG performance reports from each testing term. As such, the categories for reading based on Spring 2021 data differ slightly from those reported for mathematics based on Spring 2019 data.

3.2. Descriptive Statistics

Table 3.4 presents descriptive statistics of the MAP Growth and NC EOG test scores from Spring 2021 for reading and Spring 2019 for mathematics, including the correlation coefficients (*r*) between them. The correlation coefficients between the scores range from 0.78 to 0.83 for reading and 0.75 to 0.87 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 NC EOG assessments.

Table 3.4. Descriptive Statistics of Test Scores

Grade	N	*r*	NC EOG				MAP Growth			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Reading										
3	10,979	0.83	536.5	10.4	514	566	195.8	18.3	140	248
4	13,132	0.82	542.0	10.0	517	568	203.9	17.6	142	257
5	13,193	0.81	547.4	9.7	524	573	209.6	17.4	143	262
6	12,146	0.78	550.3	9.6	528	578	213.7	17.1	153	276
7	12,108	0.80	552.6	9.9	528	580	217.3	17.3	148	268
8	11,581	0.79	556.3	9.8	532	584	220.4	17.7	153	276
Mathematics										
3	15,269	0.82	548.5	10.2	448	570	202.0	14.2	132	296
4	15,873	0.83	548.4	10.1	449	570	212.8	15.3	132	285
5	15,825	0.87	548.0	10.2	445	570	221.4	17.1	138	297
6	14,973	0.87	548.4	9.8	456	573	224.1	17.0	149	295
7	14,255	0.86	548.3	9.9	452	573	230.3	19.2	147	317
8	9,011	0.75	538.7	9.5	418	570	226.2	17.1	152	289

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

3.3. MAP Growth Cut Scores

Table 3.5 and Table 3.6 present the NC EOG scale score ranges and the corresponding MAP Growth RIT cut scores and percentile ranges by content area and grade. Bold numbers indicate the cut scores considered to be at least proficient for accountability purposes. These tables can be used to predict a student's likely achievement level on the NC EOG 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 196 in the fall is likely to reach Level 3 performance on the NC EOG reading test. A grade 3 student who obtained a MAP Growth reading RIT score of 201 in the winter is also likely to reach Level 3 performance on the NC EOG 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 substantially from the default ones, a student's projected achievement level could be different from the projections presented in this report. Partners are therefore encouraged to use the projected achievement level in students' profile, classroom, and grade reports in the NWEA reporting system since they reflect the specific instructional weeks set by partners.

Table 3.5. MAP Growth Cut Scores—Reading

NC EOG Reading								
Grade	***Not Proficient***		**Level 3**		**Level 4**		**Level 5**	
3	515–539		**540**–545		546–550		551–564	
4	517–543		**544**–547		548–555		556–568	
5	524–549		**550**–553		554–559		560–573	
6	528–551		**552**–557		558–566		567–578	
7	527–553		**554**–558		559–565		566–580	
8	532–556		**557**–562		563–571		572–584	
MAP Growth Reading								
Grade	***Not Proficient***		**Level 3**		**Level 4**		**Level 5**	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall								
2	100–182	1–76	**183**–194	77–92	195–204	93–97	205–350	98–99
3	100–195	1–72	**196**–205	73–87	206–213	88–94	214–350	95–99
4	100–203	1–66	**204**–210	67–79	211–221	80–92	222–350	93–99
5	100–211	1–67	**212**–217	68–78	218–226	79–90	227–350	91–99
6	100–216	1–67	**217**–224	68–82	225–235	83–94	236–350	95–99
7	100–218	1–64	**219**–226	65–80	227–236	81–92	237–350	93–99
8	100–221	1–63	**222**–230	64–81	231–241	82–93	242–350	94–99
Winter								
2	100–188	1–75	**189**–200	76–91	201–210	92–97	211–350	98–99
3	100–200	1–72	**201**–209	73–86	210–217	87–93	218–350	94–99
4	100–206	1–65	**207**–213	66–78	214–223	79–91	224–350	92–99
5	100–214	1–68	**215**–219	69–78	220–227	79–89	228–350	90–99
6	100–217	1–66	**218**–225	67–81	226–236	82–93	237–350	94–99
7	100–219	1–63	**220**–227	64–79	228–237	80–92	238–350	93–99
8	100–222	1–63	**223**–231	64–80	232–242	81–93	243–350	94–99
Spring								
2	100–192	1–73	**193**–202	74–88	203–211	89–95	212–350	96–99
3	100–203	1–70	**204**–211	71–83	212–218	84–91	219–350	92–99
4	100–208	1–64	**209**–214	65–76	215–224	77–89	225–350	90–99
5	100–215	1–66	**216**–220	67–76	221–228	77–88	229–350	89–99
6	100–218	1–65	**219**–226	66–81	227–237	82–93	238–350	94–99
7	100–220	1–63	**221**–228	64–79	229–238	80–91	239–350	92–99
8	100–223	1–63	**224**–232	64–80	233–243	81–93	244–350	94–99

Table 3.6. MAP Growth Cut Scores—Mathematics

NC EOG Mathematics				
Grade	***Not Proficient***	**Level 3**	**Level 4**	**Level 5**
3	520–544	**545**–550	551–559	560–570
4	520–546	**547**–551	552–559	560–570
5	520–545	**546**–550	551–560	561–570
6	525–545	**546**–550	551–560	561–573
7	525–545	**546**–549	550–559	560–573
8	515–542	**543**–547	548–554	555–570

MAP Growth Mathematics								
Grade	***Not Proficient***		**Level 3**		**Level 4**		**Level 5**	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall								
2	100–172	1–49	**173**–184	50–77	185–199	78–95	200–350	96–99
3	100–184	1–51	**185**–193	52–73	194–206	74–92	207–350	93–99
4	100–203	1–66	**204**–209	67–78	210–221	79–93	222–350	94–99
5	100–211	1–63	**212**–219	64–79	220–233	80–95	234–350	96–99
6	100–214	1–61	**215**–221	62–76	222–236	77–94	237–350	95–99
7	100–222	1–62	**223**–229	63–76	230–246	77–95	247–350	96–99
8	100–230	1–68	**231**–238	69–81	239–248	82–92	249–350	93–99
Winter								
2	100–181	1–51	**182**–192	52–76	193–207	77–95	208–350	96–99
3	100–193	1–52	**194**–202	53–73	203–215	74–91	216–350	92–99
4	100–211	1–66	**212**–217	67–78	218–229	79–92	230–350	93–99
5	100–217	1–63	**218**–225	64–78	226–240	79–94	241–350	95–99
6	100–220	1–60	**221**–228	61–76	229–243	77–94	244–350	95–99
7	100–226	1–62	**227**–234	63–77	235–251	78–94	252–350	95–99
8	100–234	1–67	**235**–243	68–82	244–253	83–92	254–350	93–99
Spring								
2	100–187	1–50	**188**–197	51–73	198–211	74–93	212–350	94–99
3	100–199	1–51	**200**–208	52–71	209–220	72–89	221–350	90–99
4	100–216	1–64	**217**–222	65–75	223–234	76–91	235–350	92–99
5	100–221	1–62	**222**–229	63–77	230–244	78–93	245–350	94–99
6	100–224	1–59	**225**–232	60–74	233–247	75–92	248–350	93–99
7	100–229	1–62	**230**–236	63–74	237–253	75–93	254–350	94–99
8	100–237	1–66	**238**–245	67–79	246–255	80–90	256–350	91–99

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 (Level 3 or higher) on the NC EOG tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rates range from 0.83 to 0.84 for reading and 0.82 to 0.88 for mathematics. These values suggest that the RIT cut scores are good at classifying students as proficient or not proficient on the NC EOG assessment.

Although the results show that MAP Growth scores can be used to predict student proficiency on the NC EOG tests with relatively high accuracy, there is a notable limitation to how these results should be used and interpreted. NC EOG 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	NC EOG		FP	FN				
Reading										
3	10,979	204	540	0.84	0.08	0.25	0.75	0.92	0.88	0.93
4	13,132	209	544	0.84	0.14	0.17	0.83	0.86	0.83	0.92
5	13,193	216	550	0.84	0.13	0.19	0.81	0.87	0.82	0.92
6	12,146	219	552	0.84	0.14	0.19	0.81	0.86	0.83	0.92
7	12,108	221	554	0.83	0.17	0.18	0.82	0.83	0.81	0.91
8	11,581	224	557	0.83	0.16	0.19	0.81	0.84	0.82	0.91
Mathematics										
3	15,269	198	545	0.87	0.24	0.07	0.93	0.76	0.88	0.93
4	15,873	212	547	0.87	0.18	0.10	0.90	0.82	0.87	0.94
5	15,825	219	546	0.88	0.15	0.10	0.90	0.85	0.90	0.95
6	14,973	222	546	0.86	0.18	0.11	0.89	0.82	0.88	0.94
7	14,255	228	546	0.88	0.14	0.10	0.90	0.86	0.90	0.95
8	9,011	234	543	0.82	0.14	0.25	0.75	0.86	0.74	0.90

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 NC EOG test based on RIT scores from fall, winter, or spring. “Prob.” indicates the probability of obtaining proficiency status on the NC EOG test in the spring. For example, a grade 3 student who obtained a MAP Growth reading score of 208 in the fall has an 87% chance of reaching proficiency on the NC EOG test.

Table 3.8. Level 3 Proficiency Projections Based on RIT Scores—Reading

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.
2	5	193	142	No	<0.01	149	No	<0.01	153	No	<0.01
	10	193	148	No	<0.01	155	No	<0.01	159	No	<0.01
	15	193	152	No	<0.01	159	No	<0.01	164	No	<0.01
	20	193	156	No	0.01	162	No	<0.01	167	No	<0.01
	25	193	159	No	0.01	165	No	<0.01	170	No	<0.01
	30	193	161	No	0.02	168	No	0.01	173	No	<0.01
	35	193	163	No	0.03	170	No	0.02	175	No	<0.01
	40	193	166	No	0.05	172	No	0.04	177	No	<0.01
	45	193	168	No	0.07	175	No	0.06	180	No	<0.01
	50	193	170	No	0.11	177	No	0.09	182	No	<0.01
	55	193	172	No	0.13	179	No	0.14	184	No	0.01
	60	193	174	No	0.19	181	No	0.17	186	No	0.02
	65	193	177	No	0.29	183	No	0.24	188	No	0.08
	70	193	179	No	0.33	186	No	0.36	191	No	0.28
	75	193	182	No	0.46	188	No	0.45	193	Yes	0.5
	80	193	184	Yes	0.54	191	Yes	0.55	196	Yes	0.8
	85	193	188	Yes	0.67	194	Yes	0.68	200	Yes	0.98
	90	193	192	Yes	0.81	199	Yes	0.83	204	Yes	>0.99
	95	193	198	Yes	0.93	205	Yes	0.95	210	Yes	>0.99
3	5	204	155	No	<0.01	160	No	<0.01	164	No	<0.01
	10	204	161	No	<0.01	167	No	<0.01	171	No	<0.01
	15	204	166	No	<0.01	171	No	<0.01	175	No	<0.01
	20	204	169	No	<0.01	175	No	<0.01	179	No	<0.01
	25	204	172	No	0.01	178	No	0.01	182	No	<0.01
	30	204	175	No	0.02	180	No	0.01	184	No	<0.01
	35	204	178	No	0.04	183	No	0.03	187	No	<0.01
	40	204	180	No	0.06	185	No	0.04	189	No	<0.01

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	204	182	No	0.07	188	No	0.08	192	No	<0.01
	50	204	185	No	0.13	190	No	0.12	194	No	<0.01
	55	204	187	No	0.18	192	No	0.17	196	No	0.01
	60	204	189	No	0.25	194	No	0.2	198	No	0.04
	65	204	192	No	0.33	197	No	0.32	201	No	0.2
	70	204	194	No	0.41	199	No	0.41	203	No	0.39
	75	204	197	Yes	0.5	202	Yes	0.55	206	Yes	0.72
	80	204	200	Yes	0.63	205	Yes	0.64	209	Yes	0.92
	85	204	204	Yes	0.75	209	Yes	0.8	213	Yes	0.99
	90	204	208	Yes	0.87	213	Yes	0.88	217	Yes	>0.99
	95	204	215	Yes	0.96	220	Yes	0.98	224	Yes	>0.99
4	5	209	166	No	<0.01	170	No	<0.01	173	No	<0.01
	10	209	173	No	<0.01	177	No	<0.01	179	No	<0.01
	15	209	177	No	<0.01	181	No	<0.01	184	No	<0.01
	20	209	181	No	0.01	184	No	<0.01	187	No	<0.01
	25	209	184	No	0.02	187	No	0.01	190	No	<0.01
	30	209	186	No	0.03	190	No	0.03	193	No	<0.01
	35	209	189	No	0.06	193	No	0.05	195	No	<0.01
	40	209	191	No	0.1	195	No	0.08	198	No	<0.01
	45	209	194	No	0.14	197	No	0.13	200	No	0.01
	50	209	196	No	0.2	199	No	0.19	202	No	0.02
	55	209	198	No	0.28	202	No	0.27	204	No	0.08
	60	209	200	No	0.36	204	No	0.35	207	No	0.28
	65	209	203	No	0.45	206	No	0.45	209	Yes	0.5
	70	209	205	Yes	0.55	209	Yes	0.6	211	Yes	0.72
	75	209	208	Yes	0.68	211	Yes	0.65	214	Yes	0.92
	80	209	211	Yes	0.76	214	Yes	0.77	217	Yes	0.99
	85	209	215	Yes	0.88	218	Yes	0.9	220	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	209	219	Yes	0.94	222	Yes	0.96	225	Yes	>0.99
	95	209	226	Yes	0.99	229	Yes	>0.99	231	Yes	>0.99
5	5	216	175	No	<0.01	178	No	<0.01	180	No	<0.01
	10	216	181	No	<0.01	184	No	<0.01	186	No	<0.01
	15	216	186	No	<0.01	189	No	<0.01	191	No	<0.01
	20	216	189	No	0.01	192	No	0.01	194	No	<0.01
	25	216	192	No	0.01	195	No	0.01	197	No	<0.01
	30	216	195	No	0.03	197	No	0.02	199	No	<0.01
	35	216	197	No	0.06	200	No	0.05	202	No	<0.01
	40	216	199	No	0.07	202	No	0.08	204	No	<0.01
	45	216	201	No	0.11	204	No	0.1	206	No	<0.01
	50	216	204	No	0.2	206	No	0.15	208	No	0.01
	55	216	206	No	0.23	209	No	0.26	211	No	0.08
	60	216	208	No	0.31	211	No	0.3	213	No	0.2
	65	216	210	No	0.4	213	No	0.4	215	No	0.39
	70	216	213	Yes	0.5	215	Yes	0.5	217	Yes	0.61
	75	216	215	Yes	0.6	218	Yes	0.65	220	Yes	0.87
	80	216	218	Yes	0.73	221	Yes	0.78	223	Yes	0.98
	85	216	222	Yes	0.84	224	Yes	0.88	226	Yes	>0.99
	90	216	226	Yes	0.93	228	Yes	0.95	230	Yes	>0.99
	95	216	232	Yes	0.99	235	Yes	0.99	237	Yes	>0.99
6	5	219	181	No	<0.01	183	No	<0.01	185	No	<0.01
	10	219	187	No	<0.01	189	No	<0.01	191	No	<0.01
	15	219	191	No	<0.01	193	No	<0.01	195	No	<0.01
	20	219	195	No	0.01	197	No	0.01	198	No	<0.01
	25	219	198	No	0.03	199	No	0.02	201	No	<0.01
	30	219	200	No	0.03	202	No	0.03	203	No	<0.01
	35	219	202	No	0.06	204	No	0.05	206	No	<0.01

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.
	40	219	205	No	0.11	206	No	0.08	208	No	<0.01
	45	219	207	No	0.14	209	No	0.16	210	No	0.01
	50	219	209	No	0.2	211	No	0.19	212	No	0.02
	55	219	211	No	0.27	213	No	0.26	214	No	0.08
	60	219	213	No	0.36	215	No	0.35	216	No	0.2
	65	219	215	No	0.4	217	No	0.45	218	No	0.39
	70	219	218	Yes	0.55	219	Yes	0.55	221	Yes	0.72
	75	219	220	Yes	0.64	222	Yes	0.69	223	Yes	0.87
	80	219	223	Yes	0.77	225	Yes	0.81	226	Yes	0.98
	85	219	226	Yes	0.86	228	Yes	0.9	229	Yes	>0.99
	90	219	231	Yes	0.96	232	Yes	0.96	233	Yes	>0.99
	95	219	237	Yes	0.99	238	Yes	0.99	239	Yes	>0.99
7	5	221	185	No	<0.01	186	No	<0.01	187	No	<0.01
	10	221	191	No	<0.01	192	No	<0.01	193	No	<0.01
	15	221	195	No	0.01	196	No	<0.01	197	No	<0.01
	20	221	198	No	0.01	200	No	0.01	201	No	<0.01
	25	221	201	No	0.03	202	No	0.02	203	No	<0.01
	30	221	204	No	0.06	205	No	0.04	206	No	<0.01
	35	221	206	No	0.08	207	No	0.07	208	No	<0.01
	40	221	208	No	0.12	210	No	0.14	211	No	<0.01
	45	221	210	No	0.18	212	No	0.16	213	No	0.01
	50	221	212	No	0.24	214	No	0.23	215	No	0.04
	55	221	214	No	0.28	216	No	0.31	217	No	0.13
	60	221	217	No	0.41	218	No	0.4	219	No	0.28
	65	221	219	Yes	0.5	220	Yes	0.5	221	Yes	0.5
	70	221	221	Yes	0.59	223	Yes	0.64	224	Yes	0.8
	75	221	224	Yes	0.72	225	Yes	0.73	226	Yes	0.92
	80	221	226	Yes	0.79	228	Yes	0.84	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	221	230	Yes	0.9	231	Yes	0.91	232	Yes	>0.99
	90	221	234	Yes	0.96	235	Yes	0.97	237	Yes	>0.99
	95	221	240	Yes	0.99	241	Yes	0.99	243	Yes	>0.99
8	5	224	188	No	<0.01	189	No	<0.01	190	No	<0.01
	10	224	194	No	<0.01	195	No	<0.01	196	No	<0.01
	15	224	198	No	0.01	199	No	<0.01	200	No	<0.01
	20	224	201	No	0.02	203	No	0.02	203	No	<0.01
	25	224	204	No	0.04	205	No	0.02	206	No	<0.01
	30	224	207	No	0.06	208	No	0.05	209	No	<0.01
	35	224	209	No	0.09	210	No	0.08	211	No	<0.01
	40	224	211	No	0.13	213	No	0.12	213	No	<0.01
	45	224	214	No	0.18	215	No	0.17	216	No	0.01
	50	224	216	No	0.25	217	No	0.24	218	No	0.04
	55	224	218	No	0.33	219	No	0.32	220	No	0.13
	60	224	220	No	0.41	221	No	0.41	222	No	0.28
	65	224	222	Yes	0.5	223	Yes	0.5	224	Yes	0.5
	70	224	225	Yes	0.63	226	Yes	0.64	227	Yes	0.8
	75	224	227	Yes	0.71	228	Yes	0.72	229	Yes	0.92
	80	224	230	Yes	0.82	231	Yes	0.83	232	Yes	0.99
	85	224	233	Yes	0.89	235	Yes	0.92	236	Yes	>0.99
	90	224	238	Yes	0.96	239	Yes	0.97	240	Yes	>0.99
	95	224	244	Yes	0.99	245	Yes	>0.99	246	Yes	>0.99

Table 3.9. Level 3 Proficiency Projections Based on RIT Scores—Mathematics

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.
2	5	188	147	No	<0.01	155	No	<0.01	161	No	<0.01
	10	188	153	No	0.01	161	No	0.01	167	No	<0.01
	15	188	157	No	0.03	165	No	0.02	171	No	<0.01
	20	188	160	No	0.07	168	No	0.06	174	No	<0.01
	25	188	162	No	0.11	171	No	0.09	177	No	<0.01
	30	188	165	No	0.16	173	No	0.14	179	No	0.01
	35	188	167	No	0.23	175	No	0.21	181	No	0.02
	40	188	169	No	0.31	177	No	0.3	183	No	0.08
	45	188	171	No	0.4	179	No	0.35	185	No	0.2
	50	188	173	Yes	0.5	181	No	0.45	187	No	0.39
	55	188	175	Yes	0.55	183	Yes	0.55	189	Yes	0.61
	60	188	177	Yes	0.64	185	Yes	0.65	192	Yes	0.87
	65	188	179	Yes	0.73	187	Yes	0.75	194	Yes	0.96
	70	188	181	Yes	0.8	189	Yes	0.79	196	Yes	0.99
	75	188	183	Yes	0.86	192	Yes	0.88	198	Yes	>0.99
	80	188	186	Yes	0.91	194	Yes	0.93	201	Yes	>0.99
	85	188	189	Yes	0.96	197	Yes	0.97	204	Yes	>0.99
	90	188	193	Yes	0.98	201	Yes	0.99	208	Yes	>0.99
	95	188	198	Yes	>0.99	207	Yes	>0.99	214	Yes	>0.99
3	5	200	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	200	164	No	0.01	172	No	<0.01	177	No	<0.01
	15	200	168	No	0.01	176	No	0.01	181	No	<0.01
	20	200	171	No	0.04	179	No	0.03	185	No	<0.01
	25	200	174	No	0.08	182	No	0.06	188	No	<0.01
	30	200	176	No	0.13	184	No	0.11	190	No	<0.01
	35	200	178	No	0.19	186	No	0.17	193	No	0.02
	40	200	180	No	0.26	189	No	0.29	195	No	0.08

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	200	182	No	0.35	191	No	0.39	197	No	0.2
	50	200	184	No	0.45	193	No	0.45	199	No	0.39
	55	200	186	Yes	0.55	195	Yes	0.55	201	Yes	0.61
	60	200	188	Yes	0.65	197	Yes	0.66	203	Yes	0.8
	65	200	190	Yes	0.74	199	Yes	0.76	206	Yes	0.96
	70	200	192	Yes	0.81	201	Yes	0.83	208	Yes	0.99
	75	200	195	Yes	0.9	204	Yes	0.92	211	Yes	>0.99
	80	200	197	Yes	0.94	206	Yes	0.95	213	Yes	>0.99
	85	200	200	Yes	0.97	210	Yes	0.98	217	Yes	>0.99
	90	200	204	Yes	0.99	214	Yes	>0.99	221	Yes	>0.99
	95	200	210	Yes	>0.99	220	Yes	>0.99	227	Yes	>0.99
	5	217	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	217	177	No	<0.01	183	No	<0.01	187	No	<0.01
	15	217	181	No	<0.01	187	No	<0.01	191	No	<0.01
	20	217	184	No	0.01	190	No	<0.01	195	No	<0.01
	25	217	186	No	0.01	193	No	0.01	198	No	<0.01
	30	217	189	No	0.03	196	No	0.02	201	No	<0.01
	35	217	191	No	0.05	198	No	0.03	203	No	<0.01
	40	217	193	No	0.09	200	No	0.06	206	No	<0.01
4	45	217	195	No	0.13	202	No	0.1	208	No	0.01
	50	217	197	No	0.19	204	No	0.16	210	No	0.02
	55	217	199	No	0.27	207	No	0.28	212	No	0.08
	60	217	201	No	0.35	209	No	0.33	215	No	0.28
	65	217	203	No	0.45	211	No	0.44	217	Yes	0.5
	70	217	205	Yes	0.55	213	Yes	0.56	220	Yes	0.8
	75	217	208	Yes	0.69	216	Yes	0.72	222	Yes	0.92
	80	217	210	Yes	0.77	219	Yes	0.84	225	Yes	0.99
	85	217	214	Yes	0.89	222	Yes	0.92	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	217	217	Yes	0.95	226	Yes	0.98	233	Yes	>0.99
	95	217	223	Yes	0.99	232	Yes	>0.99	240	Yes	>0.99
5	5	222	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	222	185	No	<0.01	189	No	<0.01	192	No	<0.01
	15	222	189	No	<0.01	194	No	<0.01	197	No	<0.01
	20	222	193	No	0.01	197	No	<0.01	200	No	<0.01
	25	222	195	No	0.01	200	No	0.01	204	No	<0.01
	30	222	198	No	0.04	203	No	0.02	206	No	<0.01
	35	222	200	No	0.06	205	No	0.03	209	No	<0.01
	40	222	202	No	0.1	207	No	0.06	211	No	<0.01
	45	222	204	No	0.15	210	No	0.13	214	No	0.01
	50	222	206	No	0.22	212	No	0.2	216	No	0.04
	55	222	208	No	0.3	214	No	0.28	218	No	0.13
	60	222	210	No	0.4	216	No	0.39	221	No	0.39
	65	222	212	Yes	0.5	219	Yes	0.56	223	Yes	0.61
	70	222	215	Yes	0.65	221	Yes	0.67	226	Yes	0.87
	75	222	217	Yes	0.74	224	Yes	0.8	228	Yes	0.96
	80	222	220	Yes	0.85	226	Yes	0.87	232	Yes	>0.99
	85	222	223	Yes	0.92	230	Yes	0.96	235	Yes	>0.99
	90	222	227	Yes	0.97	234	Yes	0.99	240	Yes	>0.99
	95	222	233	Yes	>0.99	240	Yes	>0.99	246	Yes	>0.99
6	5	225	184	No	<0.01	187	No	<0.01	190	No	<0.01
	10	225	190	No	<0.01	194	No	<0.01	197	No	<0.01
	15	225	194	No	<0.01	198	No	<0.01	201	No	<0.01
	20	225	197	No	0.01	201	No	<0.01	205	No	<0.01
	25	225	199	No	0.02	204	No	0.01	208	No	<0.01
	30	225	202	No	0.05	207	No	0.04	211	No	<0.01
	35	225	204	No	0.09	209	No	0.05	213	No	<0.01

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.
	40	225	206	No	0.13	212	No	0.11	216	No	0.01
	45	225	208	No	0.19	214	No	0.17	218	No	0.02
	50	225	210	No	0.27	216	No	0.25	220	No	0.08
	55	225	212	No	0.36	218	No	0.34	223	No	0.28
	60	225	214	No	0.45	220	No	0.45	225	Yes	0.5
	65	225	216	Yes	0.55	223	Yes	0.61	227	Yes	0.72
	70	225	219	Yes	0.69	225	Yes	0.71	230	Yes	0.92
	75	225	221	Yes	0.81	228	Yes	0.83	233	Yes	0.99
	80	225	224	Yes	0.89	231	Yes	0.91	236	Yes	>0.99
	85	225	227	Yes	0.95	234	Yes	0.96	239	Yes	>0.99
	90	225	231	Yes	0.98	238	Yes	0.99	244	Yes	>0.99
	95	225	237	Yes	>0.99	245	Yes	>0.99	251	Yes	>0.99
7	5	230	189	No	<0.01	191	No	<0.01	192	No	<0.01
	10	230	195	No	<0.01	197	No	<0.01	199	No	<0.01
	15	230	199	No	<0.01	202	No	<0.01	204	No	<0.01
	20	230	203	No	0.01	206	No	<0.01	208	No	<0.01
	25	230	206	No	0.02	209	No	0.01	211	No	<0.01
	30	230	208	No	0.03	211	No	0.02	214	No	<0.01
	35	230	211	No	0.07	214	No	0.04	216	No	<0.01
	40	230	213	No	0.11	216	No	0.07	219	No	<0.01
	45	230	215	No	0.17	219	No	0.15	221	No	0.01
	50	230	217	No	0.23	221	No	0.22	224	No	0.04
	55	230	219	No	0.31	223	No	0.3	226	No	0.13
	60	230	222	No	0.45	226	No	0.45	229	No	0.39
	65	230	224	Yes	0.55	228	Yes	0.55	231	Yes	0.61
	70	230	226	Yes	0.64	231	Yes	0.65	234	Yes	0.87
	75	230	229	Yes	0.77	233	Yes	0.74	237	Yes	0.98
	80	230	232	Yes	0.86	236	Yes	0.85	240	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	230	235	Yes	0.93	240	Yes	0.94	244	Yes	>0.99
	90	230	239	Yes	0.97	245	Yes	0.99	249	Yes	>0.99
	95	230	246	Yes	>0.99	251	Yes	>0.99	256	Yes	>0.99
8	5	238	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	238	199	No	<0.01	201	No	<0.01	203	No	<0.01
	15	238	203	No	<0.01	206	No	<0.01	208	No	<0.01
	20	238	207	No	<0.01	210	No	<0.01	212	No	<0.01
	25	238	210	No	0.01	213	No	<0.01	215	No	<0.01
	30	238	212	No	0.01	216	No	0.01	218	No	<0.01
	35	238	215	No	0.03	219	No	0.02	221	No	<0.01
	40	238	217	No	0.05	221	No	0.04	224	No	<0.01
	45	238	220	No	0.1	224	No	0.08	226	No	<0.01
	50	238	222	No	0.15	226	No	0.13	229	No	0.01
	55	238	224	No	0.21	228	No	0.19	231	No	0.02
	60	238	227	No	0.32	231	No	0.31	234	No	0.13
	65	238	229	No	0.41	233	No	0.4	237	No	0.39
	70	238	232	Yes	0.55	236	Yes	0.55	239	Yes	0.61
	75	238	234	Yes	0.63	239	Yes	0.65	242	Yes	0.87
	80	238	237	Yes	0.75	242	Yes	0.77	246	Yes	0.99
	85	238	241	Yes	0.87	246	Yes	0.9	250	Yes	>0.99
	90	238	246	Yes	0.96	251	Yes	0.97	255	Yes	>0.99
	95	238	252	Yes	0.99	258	Yes	>0.99	262	Yes	>0.99

3.6. College-and-Career Readiness Projections

The North Carolina State Board of Education adopted the college-and-career readiness cut scores for the NC EOG assessments following a standard setting in July 2021 and July 2019 for reading and mathematics, respectively (NCDPI, 2019; 2021). Students are considered college-and-career ready if they score at a Level 4 or Level 5. To assist partners in supporting students' progress toward meeting the college-and-career readiness standards, Table 3.10 and Table 3.11 present the estimated probability of achieving Level 4 or higher performance on the spring NC EOG test based on RIT scores from fall, winter, or spring.

Table 3.10. Level 4 College-and-Career Readiness Projections Based on RIT Scores—Reading

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
2	5	203	142	No	<0.01	149	No	<0.01	153	No	<0.01
	10	203	148	No	<0.01	155	No	<0.01	159	No	<0.01
	15	203	152	No	<0.01	159	No	<0.01	164	No	<0.01
	20	203	156	No	<0.01	162	No	<0.01	167	No	<0.01
	25	203	159	No	<0.01	165	No	<0.01	170	No	<0.01
	30	203	161	No	<0.01	168	No	<0.01	173	No	<0.01
	35	203	163	No	<0.01	170	No	<0.01	175	No	<0.01
	40	203	166	No	<0.01	172	No	<0.01	177	No	<0.01
	45	203	168	No	0.01	175	No	<0.01	180	No	<0.01
	50	203	170	No	0.01	177	No	0.01	182	No	<0.01
	55	203	172	No	0.01	179	No	0.01	184	No	<0.01
	60	203	174	No	0.02	181	No	0.02	186	No	<0.01
	65	203	177	No	0.05	183	No	0.03	188	No	<0.01
	70	203	179	No	0.06	186	No	0.06	191	No	<0.01
	75	203	182	No	0.11	188	No	0.09	193	No	<0.01
	80	203	184	No	0.16	191	No	0.14	196	No	0.02
	85	203	188	No	0.25	194	No	0.24	200	No	0.2
	90	203	192	No	0.41	199	No	0.41	204	Yes	0.61
	95	203	198	Yes	0.63	205	Yes	0.68	210	Yes	0.98

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
3	5	212	155	No	<0.01	160	No	<0.01	164	No	<0.01
	10	212	161	No	<0.01	167	No	<0.01	171	No	<0.01
	15	212	166	No	<0.01	171	No	<0.01	175	No	<0.01
	20	212	169	No	<0.01	175	No	<0.01	179	No	<0.01
	25	212	172	No	<0.01	178	No	<0.01	182	No	<0.01
	30	212	175	No	<0.01	180	No	<0.01	184	No	<0.01
	35	212	178	No	<0.01	183	No	<0.01	187	No	<0.01
	40	212	180	No	0.01	185	No	<0.01	189	No	<0.01
	45	212	182	No	0.01	188	No	0.01	192	No	<0.01
	50	212	185	No	0.02	190	No	0.02	194	No	<0.01
	55	212	187	No	0.04	192	No	0.03	196	No	<0.01
	60	212	189	No	0.06	194	No	0.04	198	No	<0.01
	65	212	192	No	0.09	197	No	0.08	201	No	<0.01
	70	212	194	No	0.13	199	No	0.12	203	No	0.01
	75	212	197	No	0.18	202	No	0.2	206	No	0.04
	80	212	200	No	0.29	205	No	0.27	209	No	0.2
	85	212	204	No	0.41	209	No	0.45	213	Yes	0.61
	90	212	208	Yes	0.59	213	Yes	0.59	217	Yes	0.92
	95	212	215	Yes	0.82	220	Yes	0.86	224	Yes	>0.99
4	5	215	166	No	<0.01	170	No	<0.01	173	No	<0.01
	10	215	173	No	<0.01	177	No	<0.01	179	No	<0.01
	15	215	177	No	<0.01	181	No	<0.01	184	No	<0.01
	20	215	181	No	<0.01	184	No	<0.01	187	No	<0.01
	25	215	184	No	<0.01	187	No	<0.01	190	No	<0.01
	30	215	186	No	<0.01	190	No	<0.01	193	No	<0.01
	35	215	189	No	0.01	193	No	0.01	195	No	<0.01
	40	215	191	No	0.02	195	No	0.02	198	No	<0.01
	45	215	194	No	0.04	197	No	0.03	200	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	50	215	196	No	0.06	199	No	0.05	202	No	<0.01
	55	215	198	No	0.1	202	No	0.08	204	No	<0.01
	60	215	200	No	0.14	204	No	0.13	207	No	0.01
	65	215	203	No	0.2	206	No	0.19	209	No	0.04
	70	215	205	No	0.28	209	No	0.31	211	No	0.13
	75	215	208	No	0.41	211	No	0.35	214	No	0.39
	80	215	211	Yes	0.5	214	Yes	0.5	217	Yes	0.72
	85	215	215	Yes	0.68	218	Yes	0.69	220	Yes	0.92
	90	215	219	Yes	0.8	222	Yes	0.84	225	Yes	>0.99
	95	215	226	Yes	0.94	229	Yes	0.97	231	Yes	>0.99
5	5	221	175	No	<0.01	178	No	<0.01	180	No	<0.01
	10	221	181	No	<0.01	184	No	<0.01	186	No	<0.01
	15	221	186	No	<0.01	189	No	<0.01	191	No	<0.01
	20	221	189	No	<0.01	192	No	<0.01	194	No	<0.01
	25	221	192	No	<0.01	195	No	<0.01	197	No	<0.01
	30	221	195	No	0.01	197	No	<0.01	199	No	<0.01
	35	221	197	No	0.01	200	No	0.01	202	No	<0.01
	40	221	199	No	0.02	202	No	0.02	204	No	<0.01
	45	221	201	No	0.03	204	No	0.03	206	No	<0.01
	50	221	204	No	0.07	206	No	0.05	208	No	<0.01
	55	221	206	No	0.09	209	No	0.1	211	No	<0.01
	60	221	208	No	0.14	211	No	0.12	213	No	0.01
	65	221	210	No	0.2	213	No	0.18	215	No	0.04
	70	221	213	No	0.27	215	No	0.26	217	No	0.13
	75	221	215	No	0.36	218	No	0.4	220	No	0.39
	80	221	218	Yes	0.5	221	Yes	0.55	223	Yes	0.72
	85	221	222	Yes	0.64	224	Yes	0.7	226	Yes	0.92
	90	221	226	Yes	0.8	228	Yes	0.85	230	Yes	0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	95	221	232	Yes	0.94	235	Yes	0.97	237	Yes	>0.99
6	5	227	181	No	<0.01	183	No	<0.01	185	No	<0.01
	10	227	187	No	<0.01	189	No	<0.01	191	No	<0.01
	15	227	191	No	<0.01	193	No	<0.01	195	No	<0.01
	20	227	195	No	<0.01	197	No	<0.01	198	No	<0.01
	25	227	198	No	<0.01	199	No	<0.01	201	No	<0.01
	30	227	200	No	<0.01	202	No	<0.01	203	No	<0.01
	35	227	202	No	0.01	204	No	<0.01	206	No	<0.01
	40	227	205	No	0.01	206	No	0.01	208	No	<0.01
	45	227	207	No	0.02	209	No	0.02	210	No	<0.01
	50	227	209	No	0.03	211	No	0.03	212	No	<0.01
	55	227	211	No	0.06	213	No	0.05	214	No	<0.01
	60	227	213	No	0.09	215	No	0.08	216	No	<0.01
	65	227	215	No	0.11	217	No	0.13	218	No	0.01
	70	227	218	No	0.2	219	No	0.19	221	No	0.04
	75	227	220	No	0.27	222	No	0.31	223	No	0.13
	80	227	223	No	0.4	225	No	0.45	226	No	0.39
	85	227	226	Yes	0.55	228	Yes	0.6	229	Yes	0.72
	90	227	231	Yes	0.77	232	Yes	0.78	233	Yes	0.96
	95	227	237	Yes	0.93	238	Yes	0.94	239	Yes	>0.99
7	5	229	185	No	<0.01	186	No	<0.01	187	No	<0.01
	10	229	191	No	<0.01	192	No	<0.01	193	No	<0.01
	15	229	195	No	<0.01	196	No	<0.01	197	No	<0.01
	20	229	198	No	<0.01	200	No	<0.01	201	No	<0.01
	25	229	201	No	<0.01	202	No	<0.01	203	No	<0.01
	30	229	204	No	0.01	205	No	<0.01	206	No	<0.01
	35	229	206	No	0.01	207	No	0.01	208	No	<0.01
	40	229	208	No	0.02	210	No	0.02	211	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	45	229	210	No	0.03	212	No	0.03	213	No	<0.01
	50	229	212	No	0.05	214	No	0.04	215	No	<0.01
	55	229	214	No	0.06	216	No	0.07	217	No	<0.01
	60	229	217	No	0.12	218	No	0.11	219	No	<0.01
	65	229	219	No	0.18	220	No	0.16	221	No	0.01
	70	229	221	No	0.24	223	No	0.27	224	No	0.08
	75	229	224	No	0.36	225	No	0.36	226	No	0.2
	80	229	226	No	0.45	228	Yes	0.5	229	Yes	0.5
	85	229	230	Yes	0.64	231	Yes	0.64	232	Yes	0.8
	90	229	234	Yes	0.79	235	Yes	0.8	237	Yes	0.99
	95	229	240	Yes	0.94	241	Yes	0.94	243	Yes	>0.99
	5	233	188	No	<0.01	189	No	<0.01	190	No	<0.01
	10	233	194	No	<0.01	195	No	<0.01	196	No	<0.01
	15	233	198	No	<0.01	199	No	<0.01	200	No	<0.01
	20	233	201	No	<0.01	203	No	<0.01	203	No	<0.01
	25	233	204	No	<0.01	205	No	<0.01	206	No	<0.01
	30	233	207	No	<0.01	208	No	<0.01	209	No	<0.01
	35	233	209	No	0.01	210	No	0.01	211	No	<0.01
	40	233	211	No	0.02	213	No	0.01	213	No	<0.01
8	45	233	214	No	0.03	215	No	0.02	216	No	<0.01
	50	233	216	No	0.04	217	No	0.04	218	No	<0.01
	55	233	218	No	0.07	219	No	0.06	220	No	<0.01
	60	233	220	No	0.11	221	No	0.1	222	No	<0.01
	65	233	222	No	0.15	223	No	0.14	224	No	0.01
	70	233	225	No	0.25	226	No	0.24	227	No	0.04
	75	233	227	No	0.33	228	No	0.32	229	No	0.13
	80	233	230	No	0.45	231	No	0.45	232	No	0.39
	85	233	233	Yes	0.59	235	Yes	0.64	236	Yes	0.8

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	90	233	238	Yes	0.79	239	Yes	0.8	240	Yes	0.98
	95	233	244	Yes	0.93	245	Yes	0.94	246	Yes	>0.99

Table 3.11. Level 4 College-and-Career Readiness Projections Based on RIT Scores—Mathematics

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
2	5	198	147	No	<0.01	155	No	<0.01	161	No	<0.01
	10	198	153	No	<0.01	161	No	<0.01	167	No	<0.01
	15	198	157	No	<0.01	165	No	<0.01	171	No	<0.01
	20	198	160	No	<0.01	168	No	<0.01	174	No	<0.01
	25	198	162	No	0.01	171	No	<0.01	177	No	<0.01
	30	198	165	No	0.01	173	No	0.01	179	No	<0.01
	35	198	167	No	0.03	175	No	0.02	181	No	<0.01
	40	198	169	No	0.04	177	No	0.03	183	No	<0.01
	45	198	171	No	0.07	179	No	0.04	185	No	<0.01
	50	198	173	No	0.11	181	No	0.07	187	No	<0.01
	55	198	175	No	0.14	183	No	0.12	189	No	0.01
	60	198	177	No	0.2	185	No	0.18	192	No	0.04
	65	198	179	No	0.27	187	No	0.25	194	No	0.13
	70	198	181	No	0.36	189	No	0.3	196	No	0.28
	75	198	183	No	0.45	192	No	0.45	198	Yes	0.5
	80	198	186	Yes	0.55	194	Yes	0.55	201	Yes	0.8
	85	198	189	Yes	0.69	197	Yes	0.7	204	Yes	0.96
	90	198	193	Yes	0.8	201	Yes	0.82	208	Yes	>0.99
	95	198	198	Yes	0.93	207	Yes	0.96	214	Yes	>0.99
3	5	209	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	209	164	No	<0.01	172	No	<0.01	177	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	15	209	168	No	<0.01	176	No	<0.01	181	No	<0.01
	20	209	171	No	<0.01	179	No	<0.01	185	No	<0.01
	25	209	174	No	0.01	182	No	<0.01	188	No	<0.01
	30	209	176	No	0.01	184	No	0.01	190	No	<0.01
	35	209	178	No	0.02	186	No	0.01	193	No	<0.01
	40	209	180	No	0.04	189	No	0.04	195	No	<0.01
	45	209	182	No	0.06	191	No	0.06	197	No	<0.01
	50	209	184	No	0.1	193	No	0.08	199	No	<0.01
	55	209	186	No	0.15	195	No	0.13	201	No	0.01
	60	209	188	No	0.22	197	No	0.2	203	No	0.04
	65	209	190	No	0.3	199	No	0.29	206	No	0.2
	70	209	192	No	0.4	201	No	0.39	208	No	0.39
	75	209	195	Yes	0.55	204	Yes	0.55	211	Yes	0.72
	80	209	197	Yes	0.65	206	Yes	0.66	213	Yes	0.87
	85	209	200	Yes	0.78	210	Yes	0.8	217	Yes	0.99
	90	209	204	Yes	0.9	214	Yes	0.92	221	Yes	>0.99
	95	209	210	Yes	0.97	220	Yes	0.99	227	Yes	>0.99
4	5	223	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	223	177	No	<0.01	183	No	<0.01	187	No	<0.01
	15	223	181	No	<0.01	187	No	<0.01	191	No	<0.01
	20	223	184	No	<0.01	190	No	<0.01	195	No	<0.01
	25	223	186	No	<0.01	193	No	<0.01	198	No	<0.01
	30	223	189	No	<0.01	196	No	<0.01	201	No	<0.01
	35	223	191	No	0.01	198	No	<0.01	203	No	<0.01
	40	223	193	No	0.02	200	No	0.01	206	No	<0.01
	45	223	195	No	0.03	202	No	0.02	208	No	<0.01
	50	223	197	No	0.05	204	No	0.03	210	No	<0.01
	55	223	199	No	0.09	207	No	0.08	212	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	60	223	201	No	0.13	209	No	0.1	215	No	0.01
	65	223	203	No	0.19	211	No	0.16	217	No	0.04
	70	223	205	No	0.27	213	No	0.24	220	No	0.2
	75	223	208	No	0.4	216	No	0.39	222	No	0.39
	80	223	210	Yes	0.5	219	Yes	0.56	225	Yes	0.72
	85	223	214	Yes	0.69	222	Yes	0.72	229	Yes	0.96
	90	223	217	Yes	0.81	226	Yes	0.87	233	Yes	>0.99
	95	223	223	Yes	0.95	232	Yes	0.98	240	Yes	>0.99
5	5	230	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	230	185	No	<0.01	189	No	<0.01	192	No	<0.01
	15	230	189	No	<0.01	194	No	<0.01	197	No	<0.01
	20	230	193	No	<0.01	197	No	<0.01	200	No	<0.01
	25	230	195	No	<0.01	200	No	<0.01	204	No	<0.01
	30	230	198	No	<0.01	203	No	<0.01	206	No	<0.01
	35	230	200	No	0.01	205	No	<0.01	209	No	<0.01
	40	230	202	No	0.01	207	No	<0.01	211	No	<0.01
	45	230	204	No	0.02	210	No	0.01	214	No	<0.01
	50	230	206	No	0.04	212	No	0.02	216	No	<0.01
	55	230	208	No	0.06	214	No	0.04	218	No	<0.01
	60	230	210	No	0.1	216	No	0.08	221	No	0.01
	65	230	212	No	0.15	219	No	0.16	223	No	0.02
	70	230	215	No	0.26	221	No	0.24	226	No	0.13
	75	230	217	No	0.35	224	No	0.39	228	No	0.28
	80	230	220	Yes	0.5	226	Yes	0.5	232	Yes	0.72
	85	230	223	Yes	0.65	230	Yes	0.72	235	Yes	0.92
	90	230	227	Yes	0.81	234	Yes	0.87	240	Yes	>0.99
	95	230	233	Yes	0.96	240	Yes	0.98	246	Yes	>0.99
6	5	233	184	No	<0.01	187	No	<0.01	190	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	10	233	190	No	<0.01	194	No	<0.01	197	No	<0.01
	15	233	194	No	<0.01	198	No	<0.01	201	No	<0.01
	20	233	197	No	<0.01	201	No	<0.01	205	No	<0.01
	25	233	199	No	<0.01	204	No	<0.01	208	No	<0.01
	30	233	202	No	<0.01	207	No	<0.01	211	No	<0.01
	35	233	204	No	0.01	209	No	<0.01	213	No	<0.01
	40	233	206	No	0.02	212	No	0.01	216	No	<0.01
	45	233	208	No	0.03	214	No	0.02	218	No	<0.01
	50	233	210	No	0.05	216	No	0.04	220	No	<0.01
	55	233	212	No	0.09	218	No	0.07	223	No	<0.01
	60	233	214	No	0.13	220	No	0.11	225	No	0.01
	65	233	216	No	0.19	223	No	0.21	227	No	0.04
	70	233	219	No	0.31	225	No	0.29	230	No	0.2
	75	233	221	No	0.45	228	No	0.45	233	Yes	0.5
	80	233	224	Yes	0.6	231	Yes	0.61	236	Yes	0.8
	85	233	227	Yes	0.73	234	Yes	0.75	239	Yes	0.96
	90	233	231	Yes	0.87	238	Yes	0.89	244	Yes	>0.99
	95	233	237	Yes	0.97	245	Yes	0.99	251	Yes	>0.99
7	5	237	189	No	<0.01	191	No	<0.01	192	No	<0.01
	10	237	195	No	<0.01	197	No	<0.01	199	No	<0.01
	15	237	199	No	<0.01	202	No	<0.01	204	No	<0.01
	20	237	203	No	<0.01	206	No	<0.01	208	No	<0.01
	25	237	206	No	<0.01	209	No	<0.01	211	No	<0.01
	30	237	208	No	<0.01	211	No	<0.01	214	No	<0.01
	35	237	211	No	0.01	214	No	<0.01	216	No	<0.01
	40	237	213	No	0.02	216	No	0.01	219	No	<0.01
	45	237	215	No	0.03	219	No	0.02	221	No	<0.01
	50	237	217	No	0.06	221	No	0.04	224	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Probability		Winter RIT	Projected Probability		Spring RIT	Projected Probability	
				Level 4	Prob.		Level 4	Prob.		Level 4	Prob.
	55	237	219	No	0.09	223	No	0.07	226	No	<0.01
	60	237	222	No	0.17	226	No	0.15	229	No	0.01
	65	237	224	No	0.23	228	No	0.22	231	No	0.04
	70	237	226	No	0.31	231	No	0.3	234	No	0.2
	75	237	229	No	0.45	233	No	0.4	237	Yes	0.5
	80	237	232	Yes	0.6	236	Yes	0.55	240	Yes	0.8
	85	237	235	Yes	0.73	240	Yes	0.74	244	Yes	0.98
	90	237	239	Yes	0.86	245	Yes	0.9	249	Yes	>0.99
	95	237	246	Yes	0.97	251	Yes	0.98	256	Yes	>0.99
8	5	246	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	246	199	No	<0.01	201	No	<0.01	203	No	<0.01
	15	246	203	No	<0.01	206	No	<0.01	208	No	<0.01
	20	246	207	No	<0.01	210	No	<0.01	212	No	<0.01
	25	246	210	No	<0.01	213	No	<0.01	215	No	<0.01
	30	246	212	No	<0.01	216	No	<0.01	218	No	<0.01
	35	246	215	No	<0.01	219	No	<0.01	221	No	<0.01
	40	246	217	No	0.01	221	No	<0.01	224	No	<0.01
	45	246	220	No	0.01	224	No	0.01	226	No	<0.01
	50	246	222	No	0.03	226	No	0.02	229	No	<0.01
	55	246	224	No	0.04	228	No	0.03	231	No	<0.01
	60	246	227	No	0.08	231	No	0.07	234	No	<0.01
	65	246	229	No	0.13	233	No	0.1	237	No	0.01
	70	246	232	No	0.21	236	No	0.19	239	No	0.02
	75	246	234	No	0.28	239	No	0.26	242	No	0.13
	80	246	237	No	0.41	242	No	0.4	246	Yes	0.5
	85	246	241	Yes	0.59	246	Yes	0.6	250	Yes	0.87
	90	246	246	Yes	0.79	251	Yes	0.81	255	Yes	0.99
	95	246	252	Yes	0.93	258	Yes	0.96	262	Yes	>0.99

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