Predicting Performance on the Iowa Statewide Assessment of Student Progress (ISASP) Based on NWEA MAP Growth Scores

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NWEA Psychometrics and Analytics

Linking Study Updates

Date	Description
2010-08	Initial study conducted for Iowa in reading and mathematics using Fall 2007, 2008, and 2009 data.
2017-10	Iowa used the results from the Smarter Balanced Assessment Consortium (SBAC) linking study report.
2020-12-22	Incorporated the 2020 MAP Growth norms using Spring 2019 data for ELA and mathematics grades 3–8. Not enough data available to include science.
2021-11-02	Added the grades 9–10 cut scores using Spring 2019 data. Not enough data available to include ELA & mathematics 11 and science 10. The grades 3–8 ELA and mathematics results from December 2020 remain the same but are included in this report so all up-to-date ISASP linking study results are in one location.
2025-08	Updated the linking study based on the 2025 norms.

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Executive Summary

To predict student achievement on the Iowa Statewide Assessment of Student Progress (ISASP) in grades 3–10 English language arts (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 ISASP performance 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. ISASP replaced the Iowa Assessments and was first administered in Spring 2019. The linking study has been updated to generate MAP Growth cut scores for the new summative assessments in grades 3–10 and to provide percentiles corresponding to the most recent 2025 NWEA MAP Growth norms (NWEA, 2025).

Table E.1 presents the ISASP *Proficient* performance level cut scores and the corresponding MAP Growth RIT cut scores that allow teachers to identify students who are on track for proficiency (*Proficient* or higher) on the state summative test and those who are not. For example, the *Proficient* cut score on the ISASP grade 3 ELA test is 398. A grade 3 student with a MAP Growth reading RIT score of 186 in the fall is likely to meet proficiency on the ISASP ELA test in the spring, whereas a grade 3 student with a MAP Growth reading RIT score lower than 186 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 ISASP 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 ISASP Proficiency

Assessment		*Proficient* Cut Scores by Grade								
		2	3	4	5	6	7	8	9	10
ELA/Reading										
ISASP Spring		–	398	414	437	456	475	494	505	530
MAP Growth	Fall	172	186	195	203	208	211	215	216	217
	Winter	178	191	198	206	209	213	216	217	218
	Spring	183	195	201	208	211	214	217	218	219
Mathematics										
ISASP Spring		–	390	409	429	450	469	490	513	537
MAP Growth	Fall	169	182	194	202	209	214	220	226	229
	Winter	177	190	201	208	215	218	224	228	231
	Spring	184	197	207	212	219	221	227	230	233

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 ISASP grades 3–10 ELA and mathematics tests are Iowa's state summative assessments aligned to the Iowa Core Standards. Based on their test scores, students are placed into one of

three performance levels: *Not Yet Proficient*, *Proficient*, and *Advanced*. The *Proficient* 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 to 350.

E.2. Linking Methods

The equipercentile linking method (Kolen & Brennan, 2004) was used to produce the RIT cut scores for the spring administration that correspond to performance levels on the ISASP summative assessments for every subject and grade. MAP Growth cut scores for grade 2, as well as those for the fall and winter administrations of all grades, are also provided so that educators can track grade 2 students' progress on the ISASP test by grade 3, alongside all other students, early in the year. These cut scores were derived from the spring cuts[1] and the growth norms for the adjacent grades (i.e., grades 2 to 3), or fall and winter administrations to the spring administration.

E.3. Student Sample

Table E.2 presents the numbers of Iowa students from 9 districts and 50 schools who were included in the linking study sample for grades 3–8 and from 10 districts and 11 schools who were included for grades 9–10. Only students who took both the MAP Growth and ISASP assessments in Spring 2019 were included.

Table E.2. Linking Study Sample

Grade	# Students	
	ELA/Reading	Mathematics
3	1,273	1,270
4	1,449	1,313
5	2,494	2,361
6	2,620	2,606
7	2,698	2,689
8	2,853	2,850
9	1,287	1,269
10	1,185	1,109

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

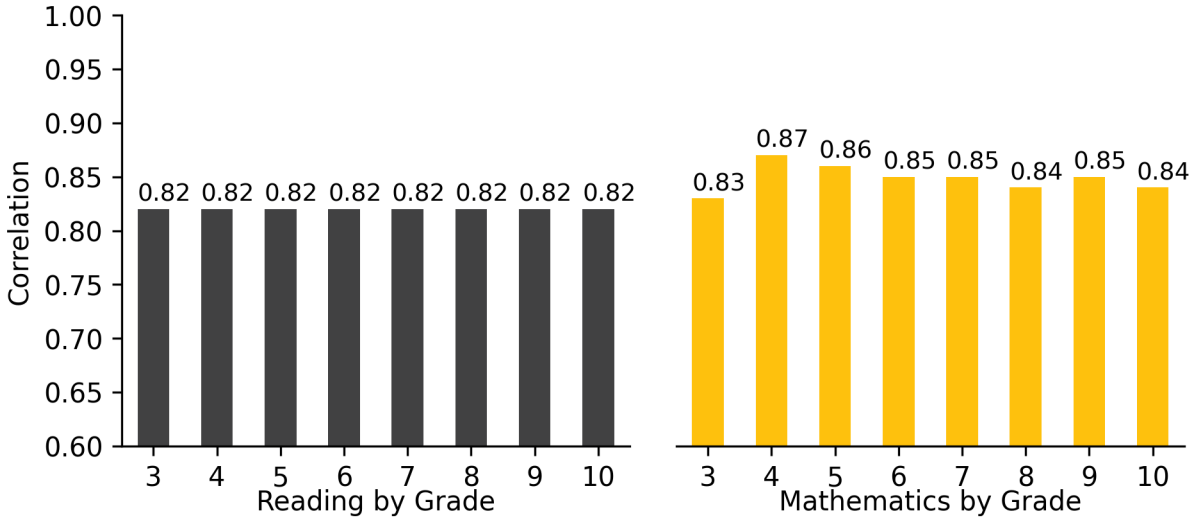
[1] To enhance content validity, NWEA developed an Enhanced Item-Selection Algorithm (EISA) for the MAP Growth assessment to prioritize grade-level content. A pilot study (Meyer et al., 2023) showed that students taking MAP Growth with EISA demonstrated higher average math scores compared with those 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.

linking study sample represents the state student population in terms of race, sex, and performance level, post-stratification weighting was applied to statistically adjust the sample so 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 3–10 were conducted based on the weighted sample.

E.4. Test Score Relationships

Correlations between MAP Growth RIT scores and ISASP scores range from 0.82 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 ISASP assessments.

Figure E.1. Correlations Between MAP Growth and ISASP Test Scores

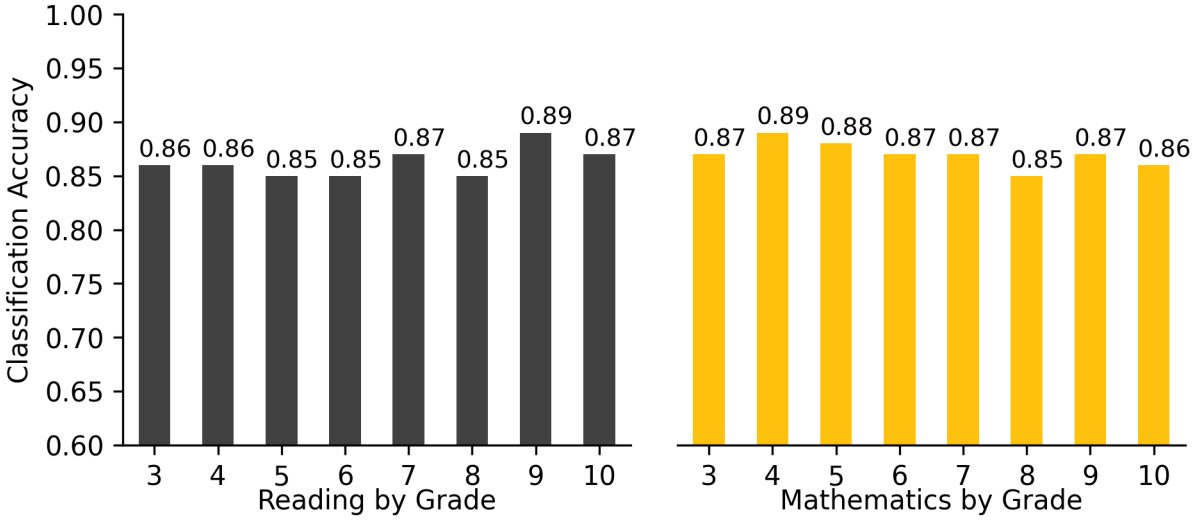


E.5. Accuracy of MAP Growth Classifications

Figure E.2 presents the classification accuracy statistics that show the proportion of students correctly classified by their RIT scores as proficient (*Proficient* or higher) or not proficient (lower than *Proficient*) on the ISASP tests.[2] For example, the MAP Growth reading grade 3 *Proficient* cut score has a 0.86 accuracy rate, meaning it accurately classified student achievement on the state test for 86% of the sample. The results range from 0.85 to 0.89 across both content areas, indicating that RIT scores have a high accuracy rate of identifying student proficiency on the ISASP 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 Iowa Statewide Assessment of Student Progress (ISASP) grades 3–10 English language arts (ELA) and mathematics assessments with Rasch Unit (RIT) scores from the MAP Growth assessments taken during the Spring 2019 term. MAP Growth cut scores are also included for grade 2 so that educators can track early learners' progress toward proficiency on the ISASP 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 performance levels for the spring ISASP assessment
4. Classification accuracy statistics to determine the degree to which MAP Growth accurately predicts student proficiency status on the ISASP tests
5. The probability of achieving grade-level proficiency on the ISASP assessment based on MAP Growth RIT scores from fall, winter, and spring

The linking study has been updated to generate MAP Growth cut scores for the Iowa summative assessments in grades 3–10 and to provide percentiles corresponding to the most recent 2025 NWEA MAP Growth norms (NWEA, 2025).

1.2. Assessment Overview

The ISASP grades 3–10 ELA and mathematics summative assessments are aligned to the Iowa Core Standards. Each assessment has two cut scores (i.e., the minimum score a student must get on a test to be placed in a certain performance level) that distinguish between the following performance levels: *Not Yet Proficient*, *Proficient*, and *Advanced*. The *Proficient* 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 to 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 ISASP assessments. NWEA requested that Iowa districts recruited to participate in the study share their student and score data for the target term. Districts also permitted NWEA to access their students' 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 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 ISASP 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's test-taking student population in terms of race, sex, and performance level. These variables were selected because they are known to be correlated with students' academic achievement and are often readily available in state summative assessment reports. The weighted sample should match the target population as closely as possible for the key demographics and performance characteristics as defined by the state. Specifically, 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 performance 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 ISASP assessment are reported for grades 3–10, as well as for grade 2 so that educators can track early learners' progress toward proficiency (*Proficient* or higher) on the ISASP 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 performance 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 3–10 that correspond to the spring ISASP performance 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., ISASP). 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 ISASP tests on the scale of MAP Growth, $P(x)$ is the percentile rank of a given score on the ISASP 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 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 3–10. 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.

The MAP Growth conditional growth norms were also used to calculate the fall, winter, and spring cuts for grade 2. 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 ISASP 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 (*Proficient* or higher) or not proficient (lower than *Proficient*) on the ISASP 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 *Proficient* 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 (*Proficient* 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 ISASP test 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 ISASP test 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 *Proficient* 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 on the ISASP test 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 ISASP assessments in Spring 2019 were included in the study sample. Data used in this study were collected from 9 districts and 50 schools in Iowa for grades 3–8 and from 10 districts and 11 schools for grades 9–10. As mentioned in Section 2.2, the demographic categories as defined by the state's assessment report for each grade level were used in the post-stratification weighting calculations. Some race categories were collapsed to avoid having null (i.e., missing) cells that prevent the post-stratification weighting from being performed. In the grades 3–8 sample, the smaller American Indian/Alaska Native (AI/AN), Native Hawaiian/Pacific Islander (NH/PI), and Not Specified groups were combined into Other to preserve these observations. In the grades 9–10 sample, NH/PI was combined with Asian to preserve the small counts of the NH/PI observations. The demographic distributions are therefore presented separately for the grades 3–8 and 9–10 samples.

The first three tables present the sample data for grades 3–8. Table 3.1 presents the demographic distributions of race, sex, and performance level in the original unweighted study sample. Table 3.2 presents the distributions of the target population of students who took the Spring 2019 ISASP tests. Table 3.3 presents the demographic and performance distributions of the sample after weighting, which are almost identical to the ISASP student population distributions. Table 3.4 presents study sample information for grades 9–10. The analyses in this study were conducted using the weighted sample.

Table 3.1. Linking Study Sample Demographics (Unweighted)—Grades 3–8

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA/Reading							
	Total N	1,273	1,449	2,494	2,620	2,698	2,853
Race	Asian	4.4	4.0	5.3	6.0	5.2	5.0
	Black	2.6	3.0	5.9	5.0	5.0	5.7
	Hispanic	9.7	7.7	4.8	4.8	5.3	5.5
	Multi-race	4.1	2.9	2.8	3.6	2.9	2.5
	Other [a]	0.7	0.6	0.6	0.8	0.4	0.6
	White	78.6	81.8	80.5	79.7	81.1	80.8
Sex	Female	49.7	47.2	48.1	50.4	47.8	48.4
	Male	50.3	52.8	51.9	49.6	52.2	51.6
Performance Level	*Not Yet Proficient*	36.7	28.8	29.4	22.9	23.4	23.2
	Proficient	55.9	63.3	62.5	66.4	66.6	64.2
	Advanced	7.4	7.9	8.1	10.7	10.0	12.6
Mathematics							
	Total N	1,270	1,313	2,361	2,606	2,689	2,850
Race	Asian	4.4	4.2	5.5	6.1	5.2	4.9
	Black	2.6	3.1	6.2	5.1	5.0	5.4
	Hispanic	9.6	8.5	5.0	4.8	5.4	5.5
	Multi-race	4.1	3.2	2.8	3.7	3.0	2.5

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
	Other [a]	0.8	0.6	0.6	0.8	0.4	0.7
	White	78.5	80.4	80.1	79.5	81.0	81.0
Sex	Female	49.7	47.4	47.9	50.2	48.0	48.1
	Male	50.3	52.6	52.1	49.8	52.0	51.9
Performance Level	*Not Yet Proficient*	25.9	22.8	22.9	20.3	22.4	20.4
	Proficient	55.0	57.1	51.0	53.7	60.8	63.5
	Advanced	19.1	20.0	26.1	26.0	16.8	16.0

[a] Other includes American Indian/Alaskan Native (AI/AN), Native Hawaiian/Pacific Islander (NH/PI), and Not Specified.

Table 3.2. Spring 2019 ISASP Student Population Demographics—Grades 3–8

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA							
	Total N	37,243	37,929	39,126	39,189	38,601	37,897
Race	Asian	2.5	2.5	2.4	2.3	2.3	2.4
	Black	6.7	6.7	6.5	6.2	6.0	6.1
	Hispanic	11.3	11.5	11.6	11.4	11.6	11.1
	Multi-race	4.4	4.3	4.3	4.1	3.9	3.8
	Other [a]	0.8	0.8	0.7	0.7	0.7	0.7
	White	74.3	74.3	74.5	75.3	75.6	75.9
Sex	Female	48.8	48.6	48.8	48.8	48.8	48.8
	Male	51.2	51.4	51.2	51.2	51.2	51.2
Performance Level	*Not Yet Proficient*	28.9	27.4	32.7	31.8	30.8	31.2
	Proficient	60.6	64.9	62.2	62.0	63.3	60.7
	Advanced	10.5	7.7	5.1	6.2	5.8	8.1
Mathematics							
	Total N	37,304	37,982	39,182	39,272	38,672	37,984
Race	Asian	2.5	2.5	2.4	2.3	2.3	2.4
	Black	6.7	6.7	6.5	6.2	6.0	6.1
	Hispanic	11.3	11.5	11.6	11.4	11.6	11.1
	Multi-race	4.4	4.3	4.3	4.1	3.9	3.8
	Other [a]	0.8	0.8	0.7	0.7	0.7	0.7
	White	74.3	74.3	74.5	75.2	75.5	75.9
Sex	Female	48.8	48.6	48.8	48.8	48.8	48.8
	Male	51.2	51.4	51.2	51.2	51.2	51.2
Performance Level	*Not Yet Proficient*	28.4	27.7	30.5	30.6	30.0	28.4
	Proficient	56.2	58.7	54.2	55.2	60.3	61.0
	Advanced	15.5	13.5	15.3	14.2	9.7	10.5

[a] Other includes American Indian/Alaskan Native (AI/AN), Native Hawaiian/Pacific Islander (NH/PI), and Not Specified.

Table 3.3. Linking Study Sample Demographics (Weighted)—Grades 3–8

Demographic Subgroup		% Students by Grade					
		3	4	5	6	7	8
ELA/Reading							
	Total N	1,273	1,449	2,494	2,620	2,698	2,853
Race	Asian	2.5	2.5	2.4	2.3	2.3	2.4
	Black	6.7	6.7	6.5	6.2	6.0	6.1
	Hispanic	11.3	11.5	11.6	11.4	11.6	11.1
	Multi-race	4.4	4.3	4.3	4.1	3.9	3.8
	Other [a]	0.8	0.8	0.7	0.7	0.7	0.7
	White	74.3	74.3	74.5	75.3	75.6	75.9
Sex	Female	48.8	48.6	48.8	48.8	48.8	48.8
	Male	51.2	51.4	51.2	51.2	51.2	51.2
Performance Level	*Not Yet Proficient*	28.9	27.4	32.7	31.8	30.8	31.2
	Proficient	60.6	64.9	62.2	62.0	63.3	60.7
	Advanced	10.5	7.7	5.1	6.2	5.8	8.1
Mathematics							
	Total N	1,270	1,313	2,361	2,606	2,689	2,850
Race	Asian	2.5	2.5	2.4	2.3	2.3	2.4
	Black	6.7	6.7	6.5	6.2	6.0	6.1
	Hispanic	11.3	11.5	11.6	11.4	11.6	11.1
	Multi-race	4.4	4.3	4.3	4.1	3.9	3.8
	Other [a]	0.8	0.8	0.7	0.7	0.7	0.7
	White	74.3	74.3	74.5	75.2	75.5	75.8
Sex	Female	48.8	48.6	48.8	48.8	48.8	48.8
	Male	51.2	51.4	51.2	51.2	51.2	51.2
Performance Level	*Not Yet Proficient*	28.4	27.7	30.5	30.6	30.0	28.4
	Proficient	56.2	58.7	54.2	55.2	60.3	61.0
	Advanced	15.5	13.5	15.3	14.2	9.7	10.5

[a] Other includes American Indian/Alaskan Native (AI/AN), Native Hawaiian/Pacific Islander (NH/PI), and Not Specified.

Table 3.4. Linking Study Sample and Spring 2019 ISASP Student Population Demographic and Performance Distributions—Grades 9–10

Demographic Subgroup		Spring 2019 ISASP		Linking Study Sample			
				Unweighted		Weighted	
		9	10	9	10	9	10
ELA/Reading							
	Total N	36,413	35,866	1,287	1,185	1,287	1,185
Race	Asian/Pacific Islander	2.9	2.9	3.9	4.1	2.9	2.9
	Black	6.0	5.7	3.3	3.5	6.0	5.7
	Hispanic	11.2	10.7	12.4	10.6	11.2	10.7
	Multi-race	3.6	3.1	3.0	2.7	3.6	3.1
	Native American	0.4	0.4	0.5	1.0	0.4	0.4

Demographic Subgroup		Spring 2019 ISASP		Linking Study Sample			
				Unweighted		Weighted	
		9	10	9	10	9	10
	White	76.1	77.2	76.9	78.0	76.1	77.2
Sex	Female	48.6	49.0	48.3	49.8	48.6	49.0
	Male	51.4	51.0	51.7	50.2	51.4	51.0
Performance Level	*Not Yet Proficient*	24.8	26.2	28.0	26.7	24.8	26.2
	Proficient	65.7	64.3	61.0	62.4	65.7	64.3
	Advanced	9.5	9.6	11.0	10.9	9.5	9.6
Mathematics							
	Total N	36,491	35,964	1,269	1,109	1,269	1,109
Race	Asian/Pacific Islander	2.9	2.9	3.0	2.6	2.9	2.9
	Black	6.0	5.7	3.6	3.5	6.0	5.7
	Hispanic	11.2	10.7	13.2	12.1	11.2	10.7
	Multi-race	3.6	3.1	2.8	2.3	3.6	3.1
	Native American	0.4	0.4	0.5	1.1	0.4	0.4
	White	76.0	77.1	76.9	78.4	76.0	77.1
Sex	Female	48.6	49.0	48.5	49.1	48.6	49.0
	Male	51.4	51.0	51.5	50.9	51.4	51.0
Performance Level	*Not Yet Proficient*	31.3	33.4	35.0	36.0	31.3	33.4
	Proficient	57.7	55.4	51.4	58.6	57.7	55.4
	Advanced	11.0	11.2	13.6	5.4	11.0	11.2

3.2. Descriptive Statistics

Table 3.5 presents descriptive statistics of the MAP Growth and ISASP test scores from Spring 2019, including the correlation coefficients (*r*) between them. The correlation coefficients between the scores is 0.82 for all grades in ELA/reading and range from 0.83 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 ISASP assessments.

Table 3.5. Descriptive Statistics of Test Scores

Grade	N	*r*	ISASP				MAP Growth			
			Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
ELA/Reading										
3	1,273	0.82	412.4	26.9	353	491	200.7	15.0	147	239
4	1,449	0.82	433.2	31.9	358	532	207.3	13.9	151	252
5	2,494	0.82	455.0	37.8	368	582	212.5	14.1	148	251
6	2,620	0.82	479.0	43.8	376	621	216.6	14.7	160	259
7	2,698	0.82	501.5	47.7	392	672	220.4	14.8	156	270
8	2,853	0.82	523.8	52.1	400	709	223.0	15.4	160	280
9	1,287	0.82	544.7	57.2	417	718	224.2	17.0	157	271
10	1,185	0.82	569.3	58.1	446	744	226.3	16.9	152	277
Mathematics										
3	1,270	0.83	409.9	29.2	354	510	202.1	13.7	145	246
4	1,313	0.87	433.1	35.0	364	540	212.1	15.0	158	264
5	2,361	0.86	456.2	42.1	378	590	219.1	16.6	148	277
6	2,606	0.85	478.7	46.4	385	640	223.6	16.4	165	284
7	2,689	0.85	503.2	51.0	399	680	228.8	17.1	165	291
8	2,850	0.84	528.4	56.3	427	720	233.1	18.7	152	292
9	1,269	0.85	545.1	58.4	429	736	233.8	20.1	154	287
10	1,109	0.84	566.4	58.1	456	752	236.6	20.3	158	294

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

3.3. MAP Growth Cut Scores

Table 3.6 and Table 3.7 present the ISASP 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 performance level on the ISASP 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 186 in the fall is likely to reach *Proficient* on the ISASP ELA test. A grade 3 student who obtained a MAP Growth reading RIT score of 191 in the winter is also likely to reach *Proficient* on the ISASP 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 performance level could be different from the projections presented in this document. Partners are therefore encouraged to use the projected performance level in students' profile, classroom, and grade reports in the NWEA reporting system since they reflect the specific instructional weeks set by partners.

Table 3.6. MAP Growth Cut Scores—ELA/Reading

ISASP ELA			
Grade	***Not Yet Proficient***	***Proficient***	***Advanced***
3	345–397	**398**–446	447–510
4	350–413	**414**–477	478–540
5	355–436	**437**–512	513–590
6	360–455	**456**–540	541–640
7	370–474	**475**–568	569–680
8	385–493	**494**–593	594–720
9	410–504	**505**–617	618–750
10	435--529	**530**–641	642–780

MAP Growth Reading						
Grade	***Not Yet Proficient***		***Proficient***		***Advanced***	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall						
2	100–171	1–54	**172**–202	55–96	203–350	97–99
3	100–185	1–52	**186**–212	53–93	213–350	94–99
4	100–194	1–47	**195**–221	48–92	222–350	93–99
5	100–202	1–47	**203**–229	48–92	230–350	93–99
6	100–207	1–47	**208**–232	48–91	233–350	92–99
7	100–210	1–46	**211**–236	47–92	237–350	93–99
8	100–214	1–47	**215**–238	48–90	239–350	91–99
9	100–215	1–49	**216**–240	50–90	241–350	91–99
10	100–216	1–47	**217**–242	48–91	243–350	92–99
Winter						
2	100–177	1–52	**178**–208	53–96	209–350	97–99
3	100–190	1–51	**191**–216	52–92	217–350	93–99
4	100–197	1–46	**198**–223	47–91	224–350	92–99
5	100–205	1–48	**206**–230	49–91	231–350	92–99
6	100–208	1–45	**209**–233	46–91	234–350	92–99
7	100–212	1–47	**213**–237	48–92	238–350	93–99
8	100–215	1–47	**216**–239	48–90	240–350	91–99
9	100–216	1–50	**217**–241	51–91	242–350	92–99
10	100–217	1–49	**218**–243	50–91	244–350	92–99
Spring						
2	100–182	1–52	**183**–209	53–94	210–350	95–99
3	100–194	1–52	**195**–217	53–90	218–350	91–99
4	100–200	1–47	**201**–224	48–89	225–350	90–99
5	100–207	1–48	**208**–231	49–91	232–350	92–99
6	100–210	1–47	**211**–234	48–91	235–350	92–99
7	100–213	1–47	**214**–238	48–91	239–350	92–99
8	100–216	1–47	**217**–240	48–90	241–350	91–99
9	100–217	1–51	**218**–242	52–91	243–350	92–99
10	100–218	1–50	**219**–244	51–92	245–350	93–99

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 3.7. MAP Growth Cut Scores—Mathematics

ISASP Mathematics			
Grade	***Not Yet Proficient***	***Proficient***	***Advanced***
3	345–389	**390**–442	443–510
4	350–408	**409**–475	476–540
5	355–428	**429**–502	503–590
6	360–449	**450**–531	532–640
7	370–468	**469**–574	575–680
8	385–489	**490**–605	606–720
9	410–512	**513**–625	626–750
10	435–536	**537**–653	654–780

MAP Growth Mathematics						
Grade	***Not Yet Proficient***		***Proficient***		***Advanced***	
	RIT	**Percentile**	**RIT**	**Percentile**	**RIT**	**Percentile**
Fall						
2	100–168	1–39	**169**–198	40–94	199–350	95–99
3	100–181	1–44	**182**–205	45–91	206–350	92–99
4	100–193	1–41	**194**–221	42–93	222–350	94–99
5	100–201	1–39	**202**–229	40–92	230–350	93–99
6	100–208	1–46	**209**–233	47–92	234–350	93–99
7	100–213	1–42	**214**–246	43–95	247–350	96–99
8	100–219	1–45	**220**–252	46–94	253–350	95–99
9	100–225	1–51	**226**–258	52–96	259–350	97–99
10	100–228	1–54	**229**–264	55–97	265–350	98–99
Winter						
2	100–176	1–38	**177**–206	39–94	207–350	95–99
3	100–189	1–43	**190**–214	44–90	215–350	91–99
4	100–200	1–41	**201**–229	42–92	230–350	93–99
5	100–207	1–40	**208**–236	41–92	237–350	93–99
6	100–214	1–47	**215**–240	48–92	241–350	93–99
7	100–217	1–43	**218**–251	44–94	252–350	95–99
8	100–223	1–45	**224**–257	46–94	258–350	95–99
9	100–227	1–51	**228**–259	52–95	260–350	96–99
10	100–230	1–52	**231**–265	53–96	266–350	97–99
Spring						
2	100–183	1–40	**184**–210	41–92	211–350	93–99
3	100–196	1–44	**197**–219	45–88	220–350	89–99
4	100–206	1–42	**207**–234	43–91	235–350	92–99
5	100–211	1–40	**212**–240	41–90	241–350	91–99
6	100–218	1–46	**219**–244	47–90	245–350	91–99
7	100–220	1–43	**221**–253	44–93	254–350	94–99
8	100–226	1–45	**227**–259	46–93	260–350	94–99
9	100–229	1–51	**230**–260	52–93	261–350	94–99
10	100–232	1–52	**233**–266	53–94	267–350	95–99

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 3.8 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 ISASP tests, providing insight into the predictive validity of MAP Growth. The overall classification accuracy rates range from 0.85 to 0.89 for ELA/reading and 0.85 to 0.89 for mathematics. These values suggest that the RIT cut scores are good at classifying students as proficient or not proficient on the ISASP assessment.

Although the results show that MAP Growth scores can be used to accurately classify students as likely to be proficient on the ISASP tests, there is a notable limitation to how these results should be used and interpreted. ISASP 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 3.8. Classification Accuracy Results

Grade	N	Cut Score		Class. Accuracy	Rate		Sensitivity	Specificity	Precision	AUC
		MAP Growth	ISASP		FP	FN				
ELA/Reading										
3	1,273	195	398	0.86	0.26	0.09	0.91	0.74	0.90	0.92
4	1,449	201	414	0.86	0.25	0.10	0.90	0.75	0.91	0.92
5	2,494	208	437	0.85	0.24	0.10	0.90	0.76	0.88	0.92
6	2,620	211	456	0.85	0.29	0.08	0.92	0.71	0.87	0.93
7	2,698	214	475	0.87	0.27	0.07	0.93	0.73	0.88	0.94
8	2,853	217	494	0.85	0.29	0.09	0.91	0.71	0.88	0.92
9	1,287	216	505	0.89	0.25	0.06	0.94	0.75	0.92	0.93
10	1,185	218	530	0.87	0.28	0.07	0.93	0.72	0.90	0.92
Mathematics										
3	1,270	195	390	0.87	0.26	0.08	0.92	0.74	0.90	0.94
4	1,313	203	409	0.89	0.26	0.06	0.94	0.74	0.90	0.95
5	2,361	210	429	0.88	0.24	0.07	0.93	0.76	0.90	0.94
6	2,606	216	450	0.87	0.26	0.08	0.92	0.74	0.89	0.94
7	2,689	219	469	0.87	0.30	0.06	0.94	0.70	0.88	0.94
8	2,850	223	490	0.85	0.32	0.08	0.92	0.68	0.88	0.93
9	1,269	226	513	0.87	0.23	0.09	0.91	0.77	0.90	0.94
10	1,109	229	537	0.86	0.23	0.10	0.90	0.77	0.89	0.92

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

3.5. Proficiency Projections

Table 3.9 and Table 3.10 present the estimated probability of achieving proficiency (*Proficient* or higher) performance on the ISASP test based on RIT scores from fall, winter, or spring. “Prob.” indicates the probability of obtaining proficient status on the ISASP test in the spring. For example, a grade 3 student who obtained a MAP Growth reading score of 197 in the fall has an 84% chance of reaching proficiency performance on the ISASP test in the spring.

Table 3.9. Proficiency Projection Based on RIT Scores—ELA/Reading

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
2	5	183	142	No	<0.01	149	No	<0.01	153	No	<0.01
	10	183	148	No	0.01	155	No	0.01	159	No	<0.01
	15	183	152	No	0.03	159	No	0.02	164	No	<0.01
	20	183	156	No	0.07	162	No	0.05	167	No	<0.01
	25	183	159	No	0.11	165	No	0.07	170	No	<0.01
	30	183	161	No	0.16	168	No	0.14	173	No	<0.01
	35	183	163	No	0.22	170	No	0.2	175	No	0.01
	40	183	166	No	0.29	172	No	0.27	177	No	0.04
	45	183	168	No	0.37	175	No	0.36	180	No	0.2
	50	183	170	No	0.46	177	No	0.45	182	No	0.39
	55	183	172	Yes	0.5	179	Yes	0.55	184	Yes	0.61
	60	183	174	Yes	0.59	181	Yes	0.59	186	Yes	0.8
	65	183	177	Yes	0.71	183	Yes	0.68	188	Yes	0.92
	70	183	179	Yes	0.75	186	Yes	0.8	191	Yes	0.99
	75	183	182	Yes	0.84	188	Yes	0.86	193	Yes	>0.99
	80	183	184	Yes	0.89	191	Yes	0.91	196	Yes	>0.99
	85	183	188	Yes	0.94	194	Yes	0.95	200	Yes	>0.99
	90	183	192	Yes	0.98	199	Yes	0.98	204	Yes	>0.99
	95	183	198	Yes	0.99	205	Yes	>0.99	210	Yes	>0.99
3	5	195	155	No	<0.01	160	No	<0.01	164	No	<0.01
	10	195	161	No	0.01	167	No	<0.01	171	No	<0.01
	15	195	166	No	0.03	171	No	0.02	175	No	<0.01
	20	195	169	No	0.05	175	No	0.05	179	No	<0.01
	25	195	172	No	0.09	178	No	0.08	182	No	<0.01
	30	195	175	No	0.13	180	No	0.12	184	No	<0.01
	35	195	178	No	0.22	183	No	0.2	187	No	0.01
	40	195	180	No	0.29	185	No	0.24	189	No	0.04

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	45	195	182	No	0.33	188	No	0.36	192	No	0.2
	50	195	185	No	0.46	190	No	0.45	194	No	0.39
	55	195	187	Yes	0.54	192	Yes	0.55	196	Yes	0.61
	60	195	189	Yes	0.63	194	Yes	0.59	198	Yes	0.8
	65	195	192	Yes	0.71	197	Yes	0.73	201	Yes	0.96
	70	195	194	Yes	0.78	199	Yes	0.8	203	Yes	0.99
	75	195	197	Yes	0.84	202	Yes	0.88	206	Yes	>0.99
	80	195	200	Yes	0.91	205	Yes	0.92	209	Yes	>0.99
	85	195	204	Yes	0.95	209	Yes	0.97	213	Yes	>0.99
	90	195	208	Yes	0.98	213	Yes	0.99	217	Yes	>0.99
	95	195	215	Yes	>0.99	220	Yes	>0.99	224	Yes	>0.99
4	5	201	166	No	<0.01	170	No	<0.01	173	No	<0.01
	10	201	173	No	0.01	177	No	0.01	179	No	<0.01
	15	201	177	No	0.04	181	No	0.03	184	No	<0.01
	20	201	181	No	0.08	184	No	0.05	187	No	<0.01
	25	201	184	No	0.14	187	No	0.1	190	No	<0.01
	30	201	186	No	0.17	190	No	0.19	193	No	0.01
	35	201	189	No	0.28	193	No	0.27	195	No	0.04
	40	201	191	No	0.36	195	No	0.35	198	No	0.2
	45	201	194	No	0.45	197	No	0.45	200	No	0.39
	50	201	196	Yes	0.55	199	Yes	0.55	202	Yes	0.61
	55	201	198	Yes	0.64	202	Yes	0.65	204	Yes	0.8
	60	201	200	Yes	0.72	204	Yes	0.73	207	Yes	0.96
	65	201	203	Yes	0.8	206	Yes	0.81	209	Yes	0.99
	70	201	205	Yes	0.86	209	Yes	0.9	211	Yes	>0.99
	75	201	208	Yes	0.92	211	Yes	0.92	214	Yes	>0.99
	80	201	211	Yes	0.95	214	Yes	0.96	217	Yes	>0.99
	85	201	215	Yes	0.98	218	Yes	0.99	220	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	90	201	219	Yes	0.99	222	Yes	>0.99	225	Yes	>0.99
	95	201	226	Yes	>0.99	229	Yes	>0.99	231	Yes	>0.99
5	5	208	175	No	<0.01	178	No	<0.01	180	No	<0.01
	10	208	181	No	0.01	184	No	0.01	186	No	<0.01
	15	208	186	No	0.03	189	No	0.03	191	No	<0.01
	20	208	189	No	0.07	192	No	0.06	194	No	<0.01
	25	208	192	No	0.11	195	No	0.1	197	No	<0.01
	30	208	195	No	0.2	197	No	0.15	199	No	0.01
	35	208	197	No	0.27	200	No	0.26	202	No	0.04
	40	208	199	No	0.31	202	No	0.35	204	No	0.13
	45	208	201	No	0.4	204	No	0.4	206	No	0.28
	50	208	204	Yes	0.55	206	Yes	0.5	208	Yes	0.5
	55	208	206	Yes	0.6	209	Yes	0.65	211	Yes	0.8
	60	208	208	Yes	0.69	211	Yes	0.7	213	Yes	0.92
	65	208	210	Yes	0.77	213	Yes	0.78	215	Yes	0.98
	70	208	213	Yes	0.84	215	Yes	0.85	217	Yes	0.99
	75	208	215	Yes	0.89	218	Yes	0.92	220	Yes	>0.99
	80	208	218	Yes	0.94	221	Yes	0.96	223	Yes	>0.99
	85	208	222	Yes	0.97	224	Yes	0.99	226	Yes	>0.99
	90	208	226	Yes	0.99	228	Yes	>0.99	230	Yes	>0.99
	95	208	232	Yes	>0.99	235	Yes	>0.99	237	Yes	>0.99
6	5	211	181	No	<0.01	183	No	<0.01	185	No	<0.01
	10	211	187	No	0.01	189	No	0.01	191	No	<0.01
	15	211	191	No	0.04	193	No	0.03	195	No	<0.01
	20	211	195	No	0.09	197	No	0.08	198	No	<0.01
	25	211	198	No	0.16	199	No	0.13	201	No	<0.01
	30	211	200	No	0.2	202	No	0.19	203	No	0.01
	35	211	202	No	0.27	204	No	0.26	206	No	0.08

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	40	211	205	No	0.4	206	No	0.35	208	No	0.2
	45	211	207	No	0.45	209	Yes	0.5	210	No	0.39
	50	211	209	Yes	0.55	211	Yes	0.55	212	Yes	0.61
	55	211	211	Yes	0.64	213	Yes	0.65	214	Yes	0.8
	60	211	213	Yes	0.73	215	Yes	0.74	216	Yes	0.92
	65	211	215	Yes	0.77	217	Yes	0.81	218	Yes	0.98
	70	211	218	Yes	0.86	219	Yes	0.87	221	Yes	>0.99
	75	211	220	Yes	0.91	222	Yes	0.94	223	Yes	>0.99
	80	211	223	Yes	0.96	225	Yes	0.97	226	Yes	>0.99
	85	211	226	Yes	0.98	228	Yes	0.99	229	Yes	>0.99
	90	211	231	Yes	>0.99	232	Yes	>0.99	233	Yes	>0.99
	95	211	237	Yes	>0.99	238	Yes	>0.99	239	Yes	>0.99
7	5	214	185	No	<0.01	186	No	<0.01	187	No	<0.01
	10	214	191	No	0.02	192	No	0.01	193	No	<0.01
	15	214	195	No	0.05	196	No	0.03	197	No	<0.01
	20	214	198	No	0.08	200	No	0.09	201	No	<0.01
	25	214	201	No	0.15	202	No	0.11	203	No	<0.01
	30	214	204	No	0.24	205	No	0.2	206	No	0.01
	35	214	206	No	0.28	207	No	0.27	208	No	0.04
	40	214	208	No	0.36	210	No	0.4	211	No	0.2
	45	214	210	No	0.45	212	No	0.45	213	No	0.39
	50	214	212	Yes	0.55	214	Yes	0.55	215	Yes	0.61
	55	214	214	Yes	0.59	216	Yes	0.64	217	Yes	0.8
	60	214	217	Yes	0.72	218	Yes	0.73	219	Yes	0.92
	65	214	219	Yes	0.79	220	Yes	0.8	221	Yes	0.98
	70	214	221	Yes	0.85	223	Yes	0.89	224	Yes	>0.99
	75	214	224	Yes	0.92	225	Yes	0.93	226	Yes	>0.99
	80	214	226	Yes	0.95	228	Yes	0.97	229	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	85	214	230	Yes	0.98	231	Yes	0.99	232	Yes	>0.99
	90	214	234	Yes	0.99	235	Yes	>0.99	237	Yes	>0.99
	95	214	240	Yes	>0.99	241	Yes	>0.99	243	Yes	>0.99
8	5	217	188	No	<0.01	189	No	<0.01	190	No	<0.01
	10	217	194	No	0.02	195	No	0.02	196	No	<0.01
	15	217	198	No	0.06	199	No	0.04	200	No	<0.01
	20	217	201	No	0.09	203	No	0.1	203	No	<0.01
	25	217	204	No	0.15	205	No	0.12	206	No	<0.01
	30	217	207	No	0.21	208	No	0.2	209	No	0.01
	35	217	209	No	0.29	210	No	0.28	211	No	0.04
	40	217	211	No	0.37	213	No	0.36	213	No	0.13
	45	217	214	No	0.45	215	No	0.45	216	No	0.39
	50	217	216	Yes	0.55	217	Yes	0.55	218	Yes	0.61
	55	217	218	Yes	0.63	219	Yes	0.64	220	Yes	0.8
	60	217	220	Yes	0.71	221	Yes	0.72	222	Yes	0.92
	65	217	222	Yes	0.79	223	Yes	0.8	224	Yes	0.98
	70	217	225	Yes	0.87	226	Yes	0.88	227	Yes	>0.99
	75	217	227	Yes	0.91	228	Yes	0.92	229	Yes	>0.99
	80	217	230	Yes	0.96	231	Yes	0.96	232	Yes	>0.99
	85	217	233	Yes	0.98	235	Yes	0.99	236	Yes	>0.99
	90	217	238	Yes	>0.99	239	Yes	>0.99	240	Yes	>0.99
	95	217	244	Yes	>0.99	245	Yes	>0.99	246	Yes	>0.99
9	5	218	186	No	<0.01	187	No	<0.01	187	No	<0.01
	10	218	193	No	0.02	194	No	0.01	194	No	<0.01
	15	218	197	No	0.04	198	No	0.04	198	No	<0.01
	20	218	201	No	0.08	201	No	0.07	202	No	<0.01
	25	218	204	No	0.13	205	No	0.12	205	No	<0.01
	30	218	207	No	0.18	207	No	0.17	208	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	35	218	209	No	0.24	210	No	0.23	210	No	0.01
	40	218	212	No	0.34	212	No	0.3	213	No	0.08
	45	218	214	No	0.42	214	No	0.38	215	No	0.2
	50	218	216	Yes	0.5	217	Yes	0.5	217	No	0.39
	55	218	218	Yes	0.58	219	Yes	0.58	219	Yes	0.61
	60	218	221	Yes	0.69	221	Yes	0.66	222	Yes	0.87
	65	218	223	Yes	0.76	224	Yes	0.77	224	Yes	0.96
	70	218	226	Yes	0.85	226	Yes	0.83	227	Yes	0.99
	75	218	228	Yes	0.89	229	Yes	0.9	230	Yes	>0.99
	80	218	231	Yes	0.94	232	Yes	0.94	233	Yes	>0.99
	85	218	235	Yes	0.97	236	Yes	0.98	236	Yes	>0.99
	90	218	239	Yes	0.99	240	Yes	0.99	241	Yes	>0.99
	95	218	246	Yes	>0.99	247	Yes	>0.99	247	Yes	>0.99
10	5	219	188	No	0.01	188	No	<0.01	188	No	<0.01
	10	219	195	No	0.03	195	No	0.02	195	No	<0.01
	15	219	199	No	0.06	199	No	0.04	200	No	<0.01
	20	219	203	No	0.11	203	No	0.09	203	No	<0.01
	25	219	206	No	0.17	206	No	0.13	206	No	<0.01
	30	219	208	No	0.19	209	No	0.21	209	No	<0.01
	35	219	211	No	0.28	211	No	0.24	211	No	0.01
	40	219	213	No	0.35	214	No	0.34	214	No	0.08
	45	219	215	No	0.42	216	No	0.42	216	No	0.2
	50	219	218	Yes	0.54	218	Yes	0.5	218	No	0.39
	55	219	220	Yes	0.61	220	Yes	0.58	221	Yes	0.72
	60	219	222	Yes	0.69	223	Yes	0.69	223	Yes	0.87
	65	219	225	Yes	0.78	225	Yes	0.76	225	Yes	0.96
	70	219	227	Yes	0.83	228	Yes	0.84	228	Yes	0.99
	75	219	230	Yes	0.89	230	Yes	0.89	231	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	80	219	233	Yes	0.94	233	Yes	0.94	234	Yes	>0.99
	85	219	236	Yes	0.97	237	Yes	0.97	237	Yes	>0.99
	90	219	241	Yes	0.99	241	Yes	0.99	242	Yes	>0.99
	95	219	247	Yes	>0.99	248	Yes	>0.99	248	Yes	>0.99

Table 3.10. Proficiency Projection 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	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
2	5	184	147	No	0.01	155	No	<0.01	161	No	<0.01
	10	184	153	No	0.04	161	No	0.02	167	No	<0.01
	15	184	157	No	0.09	165	No	0.07	171	No	<0.01
	20	184	160	No	0.16	168	No	0.14	174	No	<0.01
	25	184	162	No	0.23	171	No	0.21	177	No	0.02
	30	184	165	No	0.31	173	No	0.3	179	No	0.08
	35	184	167	No	0.4	175	No	0.4	181	No	0.2
	40	184	169	Yes	0.5	177	Yes	0.5	183	No	0.39
	45	184	171	Yes	0.6	179	Yes	0.55	185	Yes	0.61
	50	184	173	Yes	0.69	181	Yes	0.65	187	Yes	0.8
	55	184	175	Yes	0.73	183	Yes	0.75	189	Yes	0.92
	60	184	177	Yes	0.8	185	Yes	0.82	192	Yes	0.99
	65	184	179	Yes	0.86	187	Yes	0.88	194	Yes	>0.99
	70	184	181	Yes	0.91	189	Yes	0.91	196	Yes	>0.99
	75	184	183	Yes	0.94	192	Yes	0.96	198	Yes	>0.99
	80	184	186	Yes	0.97	194	Yes	0.98	201	Yes	>0.99
	85	184	189	Yes	0.99	197	Yes	0.99	204	Yes	>0.99
	90	184	193	Yes	0.99	201	Yes	>0.99	208	Yes	>0.99
	95	184	198	Yes	>0.99	207	Yes	>0.99	214	Yes	>0.99
3	5	197	158	No	<0.01	166	No	<0.01	171	No	<0.01
	10	197	164	No	0.01	172	No	0.01	177	No	<0.01
	15	197	168	No	0.04	176	No	0.03	181	No	<0.01
	20	197	171	No	0.08	179	No	0.06	185	No	<0.01
	25	197	174	No	0.15	182	No	0.13	188	No	0.01
	30	197	176	No	0.22	184	No	0.2	190	No	0.02
	35	197	178	No	0.3	186	No	0.29	193	No	0.13
	40	197	180	No	0.4	189	No	0.45	195	No	0.28

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	45	197	182	Yes	0.5	191	Yes	0.55	197	Yes	0.5
	50	197	184	Yes	0.6	193	Yes	0.61	199	Yes	0.72
	55	197	186	Yes	0.7	195	Yes	0.71	201	Yes	0.87
	60	197	188	Yes	0.78	197	Yes	0.8	203	Yes	0.96
	65	197	190	Yes	0.85	199	Yes	0.87	206	Yes	0.99
	70	197	192	Yes	0.9	201	Yes	0.92	208	Yes	>0.99
	75	197	195	Yes	0.95	204	Yes	0.96	211	Yes	>0.99
	80	197	197	Yes	0.97	206	Yes	0.98	213	Yes	>0.99
	85	197	200	Yes	0.99	210	Yes	0.99	217	Yes	>0.99
	90	197	204	Yes	>0.99	214	Yes	>0.99	221	Yes	>0.99
	95	197	210	Yes	>0.99	220	Yes	>0.99	227	Yes	>0.99
	5	207	171	No	<0.01	176	No	<0.01	180	No	<0.01
	10	207	177	No	0.02	183	No	0.01	187	No	<0.01
	15	207	181	No	0.05	187	No	0.02	191	No	<0.01
	20	207	184	No	0.11	190	No	0.06	195	No	<0.01
	25	207	186	No	0.16	193	No	0.13	198	No	0.01
	30	207	189	No	0.27	196	No	0.24	201	No	0.04
	35	207	191	No	0.35	198	No	0.33	203	No	0.13
	40	207	193	No	0.45	200	No	0.44	206	No	0.39
4	45	207	195	Yes	0.55	202	Yes	0.56	208	Yes	0.61
	50	207	197	Yes	0.65	204	Yes	0.67	210	Yes	0.8
	55	207	199	Yes	0.73	207	Yes	0.8	212	Yes	0.92
	60	207	201	Yes	0.81	209	Yes	0.84	215	Yes	0.99
	65	207	203	Yes	0.87	211	Yes	0.9	217	Yes	>0.99
	70	207	205	Yes	0.91	213	Yes	0.94	220	Yes	>0.99
	75	207	208	Yes	0.96	216	Yes	0.98	222	Yes	>0.99
	80	207	210	Yes	0.98	219	Yes	0.99	225	Yes	>0.99
	85	207	214	Yes	0.99	222	Yes	>0.99	229	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	90	207	217	Yes	>0.99	226	Yes	>0.99	233	Yes	>0.99
	95	207	223	Yes	>0.99	232	Yes	>0.99	240	Yes	>0.99
5	5	212	180	No	<0.01	183	No	<0.01	186	No	<0.01
	10	212	185	No	0.01	189	No	0.01	192	No	<0.01
	15	212	189	No	0.04	194	No	0.03	197	No	<0.01
	20	212	193	No	0.1	197	No	0.06	200	No	<0.01
	25	212	195	No	0.15	200	No	0.13	204	No	0.01
	30	212	198	No	0.3	203	No	0.24	206	No	0.04
	35	212	200	No	0.4	205	No	0.33	209	No	0.2
	40	212	202	Yes	0.5	207	No	0.44	211	No	0.39
	45	212	204	Yes	0.6	210	Yes	0.61	214	Yes	0.72
	50	212	206	Yes	0.7	212	Yes	0.72	216	Yes	0.87
	55	212	208	Yes	0.78	214	Yes	0.8	218	Yes	0.96
	60	212	210	Yes	0.85	216	Yes	0.87	221	Yes	0.99
	65	212	212	Yes	0.9	219	Yes	0.94	223	Yes	>0.99
	70	212	215	Yes	0.95	221	Yes	0.97	226	Yes	>0.99
	75	212	217	Yes	0.97	224	Yes	0.99	228	Yes	>0.99
	80	212	220	Yes	0.99	226	Yes	0.99	232	Yes	>0.99
	85	212	223	Yes	>0.99	230	Yes	>0.99	235	Yes	>0.99
	90	212	227	Yes	>0.99	234	Yes	>0.99	240	Yes	>0.99
	95	212	233	Yes	>0.99	240	Yes	>0.99	246	Yes	>0.99
6	5	219	184	No	<0.01	187	No	<0.01	190	No	<0.01
	10	219	190	No	0.01	194	No	<0.01	197	No	<0.01
	15	219	194	No	0.02	198	No	0.01	201	No	<0.01
	20	219	197	No	0.07	201	No	0.04	205	No	<0.01
	25	219	199	No	0.11	204	No	0.09	208	No	<0.01
	30	219	202	No	0.19	207	No	0.17	211	No	0.01
	35	219	204	No	0.27	209	No	0.21	213	No	0.04

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	40	219	206	No	0.36	212	No	0.34	216	No	0.2
	45	219	208	No	0.45	214	No	0.45	218	No	0.39
	50	219	210	Yes	0.55	216	Yes	0.55	220	Yes	0.61
	55	219	212	Yes	0.64	218	Yes	0.66	223	Yes	0.87
	60	219	214	Yes	0.73	220	Yes	0.75	225	Yes	0.96
	65	219	216	Yes	0.81	223	Yes	0.86	227	Yes	0.99
	70	219	219	Yes	0.89	225	Yes	0.91	230	Yes	>0.99
	75	219	221	Yes	0.95	228	Yes	0.96	233	Yes	>0.99
	80	219	224	Yes	0.98	231	Yes	0.99	236	Yes	>0.99
	85	219	227	Yes	0.99	234	Yes	>0.99	239	Yes	>0.99
	90	219	231	Yes	>0.99	238	Yes	>0.99	244	Yes	>0.99
	95	219	237	Yes	>0.99	245	Yes	>0.99	251	Yes	>0.99
7	5	221	189	No	<0.01	191	No	<0.01	192	No	<0.01
	10	221	195	No	0.01	197	No	<0.01	199	No	<0.01
	15	221	199	No	0.03	202	No	0.02	204	No	<0.01
	20	221	203	No	0.07	206	No	0.06	208	No	<0.01
	25	221	206	No	0.17	209	No	0.12	211	No	<0.01
	30	221	208	No	0.23	211	No	0.18	214	No	0.02
	35	221	211	No	0.36	214	No	0.3	216	No	0.08
	40	221	213	No	0.45	216	No	0.4	219	No	0.28
	45	221	215	Yes	0.55	219	Yes	0.55	221	Yes	0.5
	50	221	217	Yes	0.64	221	Yes	0.65	224	Yes	0.8
	55	221	219	Yes	0.73	223	Yes	0.74	226	Yes	0.92
	60	221	222	Yes	0.83	226	Yes	0.85	229	Yes	0.99
	65	221	224	Yes	0.89	228	Yes	0.9	231	Yes	>0.99
	70	221	226	Yes	0.93	231	Yes	0.94	234	Yes	>0.99
	75	221	229	Yes	0.97	233	Yes	0.97	237	Yes	>0.99
	80	221	232	Yes	0.99	236	Yes	0.99	240	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	85	221	235	Yes	0.99	240	Yes	>0.99	244	Yes	>0.99
	90	221	239	Yes	>0.99	245	Yes	>0.99	249	Yes	>0.99
	95	221	246	Yes	>0.99	251	Yes	>0.99	256	Yes	>0.99
8	5	227	192	No	<0.01	194	No	<0.01	196	No	<0.01
	10	227	199	No	0.01	201	No	<0.01	203	No	<0.01
	15	227	203	No	0.03	206	No	0.02	208	No	<0.01
	20	227	207	No	0.07	210	No	0.05	212	No	<0.01
	25	227	210	No	0.13	213	No	0.08	215	No	<0.01
	30	227	212	No	0.18	216	No	0.16	218	No	0.01
	35	227	215	No	0.28	219	No	0.26	221	No	0.04
	40	227	217	No	0.37	221	No	0.35	224	No	0.2
	45	227	220	Yes	0.5	224	Yes	0.5	226	No	0.39
	50	227	222	Yes	0.59	226	Yes	0.6	229	Yes	0.72
	55	227	224	Yes	0.68	228	Yes	0.69	231	Yes	0.87
	60	227	227	Yes	0.79	231	Yes	0.81	234	Yes	0.98
	65	227	229	Yes	0.85	233	Yes	0.87	237	Yes	>0.99
	70	227	232	Yes	0.92	236	Yes	0.93	239	Yes	>0.99
	75	227	234	Yes	0.95	239	Yes	0.96	242	Yes	>0.99
	80	227	237	Yes	0.97	242	Yes	0.98	246	Yes	>0.99
	85	227	241	Yes	0.99	246	Yes	>0.99	250	Yes	>0.99
	90	227	246	Yes	>0.99	251	Yes	>0.99	255	Yes	>0.99
	95	227	252	Yes	>0.99	258	Yes	>0.99	262	Yes	>0.99
9	5	230	196	No	0.04	196	No	0.01	194	No	<0.01
	10	230	202	No	0.07	203	No	0.03	202	No	<0.01
	15	230	207	No	0.12	207	No	0.06	207	No	<0.01
	20	230	210	No	0.17	211	No	0.09	211	No	<0.01
	25	230	213	No	0.22	214	No	0.14	215	No	<0.01
	30	230	216	No	0.27	217	No	0.2	218	No	<0.01

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	35	230	218	No	0.31	220	No	0.25	221	No	0.01
	40	230	220	No	0.37	222	No	0.31	223	No	0.02
	45	230	223	No	0.42	225	No	0.4	226	No	0.13
	50	230	225	No	0.47	227	No	0.47	229	No	0.39
	55	230	227	Yes	0.53	230	Yes	0.53	231	Yes	0.61
	60	230	229	Yes	0.55	232	Yes	0.6	234	Yes	0.87
	65	230	232	Yes	0.63	235	Yes	0.69	237	Yes	0.98
	70	230	234	Yes	0.69	237	Yes	0.75	240	Yes	>0.99
	75	230	237	Yes	0.73	240	Yes	0.82	243	Yes	>0.99
	80	230	240	Yes	0.8	243	Yes	0.88	247	Yes	>0.99
	85	230	243	Yes	0.85	247	Yes	0.93	251	Yes	>0.99
	90	230	248	Yes	0.92	252	Yes	0.97	256	Yes	>0.99
	95	230	254	Yes	0.96	259	Yes	0.99	263	Yes	>0.99
	5	233	196	No	0.04	196	No	0.01	195	No	<0.01
	10	233	203	No	0.08	204	No	0.03	203	No	<0.01
	15	233	208	No	0.12	208	No	0.05	208	No	<0.01
	20	233	211	No	0.17	212	No	0.1	213	No	<0.01
	25	233	214	No	0.2	216	No	0.14	216	No	<0.01
	30	233	217	No	0.26	219	No	0.2	220	No	<0.01
	35	233	220	No	0.33	222	No	0.27	223	No	<0.01
10	40	233	222	No	0.35	224	No	0.32	226	No	0.02
	45	233	224	No	0.4	227	No	0.38	229	No	0.13
	50	233	227	No	0.47	229	No	0.44	231	No	0.28
	55	233	229	Yes	0.5	232	Yes	0.53	234	Yes	0.61
	60	233	232	Yes	0.58	235	Yes	0.59	237	Yes	0.87
	65	233	234	Yes	0.63	237	Yes	0.65	240	Yes	0.98
	70	233	237	Yes	0.67	240	Yes	0.73	243	Yes	>0.99
	75	233	239	Yes	0.72	243	Yes	0.8	246	Yes	>0.99

Grade	Start Percentile	Spring Cut	Fall			Winter			Spring		
			Fall RIT	Projected Proficiency		Winter RIT	Projected Proficiency		Spring RIT	Projected Proficiency	
				Proficient	Prob.		*Proficient*	Prob.		*Proficient*	Prob.
	80	233	242	Yes	0.76	246	Yes	0.86	250	Yes	>0.99
	85	233	246	Yes	0.83	250	Yes	0.92	254	Yes	>0.99
	90	233	251	Yes	0.9	255	Yes	0.96	260	Yes	>0.99
	95	233	257	Yes	0.95	263	Yes	0.99	268	Yes	>0.99

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