map GROWTH

GUIDE

Using MAP Growth to inform Algebra 1 placement

August 2026

Introduction

Algebra 1 is an important gateway course. Students who successfully complete Algebra 1 before high school have greater access to advanced mathematics courses later in their education. However, enrolling students before they have developed the necessary knowledge and skills can make it harder for them to succeed.

When making placement decisions for Algebra 1, test scores should be considered alongside other information, including prior coursework, evidence of prerequisite skills, student interest, instructional supports, and locally defined expectations for Algebra 1 success. This guide provides benchmarks on the MAP® Growth™ Math 6+ test for algebra readiness that districts and schools can use as one source of evidence when making Algebra 1 placement decisions. It explains:

- How to select the appropriate benchmark
- What the readiness benchmarks mean
- How the benchmarks are calculated
- What districts should consider if they want to increase or decrease the benchmark

What is "algebra readiness"?

"Algebra readiness" can be defined in several ways. A district may consider students ready when they can demonstrate specific prerequisite skills, earn a passing course grade, meet a state assessment standard, or continue successfully into higher-level mathematics.

For the purposes of this guide, we use the estimated likelihood that a student will meet the proficiency standard on a state Algebra 1 end-of-course assessment as the indicator of Algebra 1 readiness. Specifically, **students are categorized as "ready" if they have at least a 50% probability of reaching proficiency on the state Algebra 1 end-of-course test.**

How to select the appropriate MAP Growth benchmarks

Step 1. If your state has an end-of-course Algebra 1 linking study, use the benchmarks specific to your state.

Check if your state has a published linking study connecting the MAP Growth Math 6+ test and your state's end-of-course (EOC) Algebra 1 assessment. As of August 2026, the published Algebra 1 linking studies include four states: Georgia, North Carolina, Ohio, and Texas, but studies in additional states are underway. If your state has an EOC Algebra 1 linking study, the benchmarks specific to your state are most appropriate.

Step 2. If there is not yet a linking study for your state, use national benchmarks.

For states without linking studies, we calculate a set of national benchmarks that draw on the available state-level estimates.[1] National benchmarks are reported in the top row of Table 1.

Step 3. Identify the appropriate benchmark for your students based on when they would possibly enroll in Algebra 1.

Using the table in your state's linking study (or Table 1 below), identify the benchmark that corresponds to the grade and term of the student's MAP Growth Math 6+ test in the year before they would enroll in Algebra 1.

Table 1. Algebra 1 readiness benchmarks

	Grade in the year prior to Algebra 1 enrollment											
	SIXTH GRADE			**SEVENTH GRADE**			**EIGHTH GRADE**			**NINTH GRADE**		
	Fall	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**	**Fall**	**Winter**	**Spring**
National												
RIT Score	**226**	**233**	**237**	**233**	**235**	**237**	**230**	**234**	**237**	**232**	**235**	**237**
Percentile	***84***	***84***	***82***	***82***	***78***	***75***	***67***	***66***	***66***	***66***	***66***	***65***
State-specific												
Georgia	226	233	237	230	235	237	230	234	237	234	236	237
North Carolina				235	240	242	235	240	242	240	241	242
Ohio				235	235	237	230	234	237	230	234	237
Texas				229	234	236	229	233	236	229	233	236

Note. The cut scores in this guidance document are based on the default instructional weeks for each term (i.e., weeks 4, 20, and 32 for fall, winter, and spring, respectively), whereas instructional weeks often vary by district. The cut scores in this table may therefore differ from the results in the NWEA reporting system that reflect the specific instructional weeks set by partners.

1 The current national benchmarks are calculated based on estimates from Georgia, North Carolina, Ohio, and Texas. We will revise the national estimates at a future point when additional state linking studies are available.

Consider a hypothetical student who takes MAP Growth 6+ Math in the spring of seventh grade and is being considered for placement in Algebra 1 in eighth grade. The applicable national benchmark is the spring grade seven RIT score of 237, or scoring at the 75th percentile. The same benchmark applies if the student is in Georgia or Ohio, but Texas's benchmark is one point lower (236) and North Carolina's is five points higher (242).

What does meeting an Algebra 1 readiness benchmark mean?

A student who meets or exceeds the applicable MAP Growth 6+ Math benchmark has an estimated probability of at least 50% of meeting or exceeding the proficient standard on a state EOC Algebra 1 assessment if they take the course the following year.

In practical terms, the benchmark identifies the MAP Growth score at which a student has at least a 50/50 chance of meeting the state proficiency standard in Algebra 1 based on the states included in the underlying linking studies.

However, meeting the benchmark does not guarantee that a student will succeed in Algebra 1. Similarly, scoring below the benchmark does not mean that a student cannot succeed. Individual students may grow at different rates, respond differently to instruction, or benefit from additional academic support.

What the benchmarks can and cannot tell educators

The benchmarks can help districts and schools:

- Apply a consistent screening criterion to all students
- Estimate which students are more likely to meet an Algebra 1 proficiency standard
- Examine how a proposed placement policy may affect enrollment
- Identify students who may benefit from additional review or support
- Monitor whether placement policies are working as intended

The benchmarks cannot:

- Guarantee success or failure for an individual student
- Measure every prerequisite skill needed in a local Algebra 1 course
- Account for all differences in curriculum, instruction, pacing, or grading

How are the benchmarks calculated?

The algebra readiness benchmarks are based on NWEA® linking studies connecting MAP Growth 6+ Math performance with state EOC Algebra 1 assessment performance.

Step 1: Connect MAP Growth and state Algebra 1 performance

In states with sufficient MAP Growth Math 6+ participation, NWEA collects EOC Algebra 1 assessment scores from partners who also administer the MAP Growth Math 6+ test. We then conduct linking studies that estimate the relationship between the scores on the two assessments.

The updated evidence base includes linking studies from:

- Georgia
- North Carolina
- Ohio
- Texas

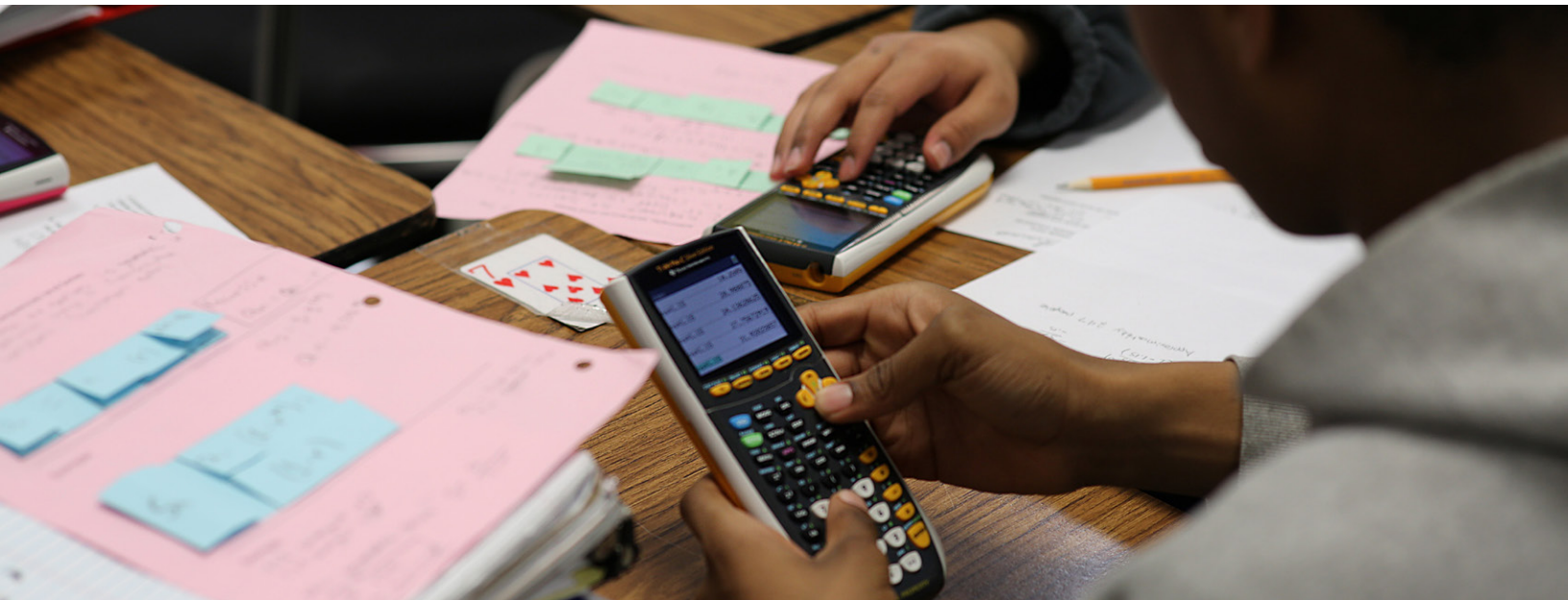
Each state uses a different Algebra 1 assessment and different proficiency standards. As a result, their estimated MAP Growth cut scores are similar but not identical.

Step 2: Identify the probability-based cut score

For each state, analysts identify the MAP Growth score associated with an estimated probability of at least 50% of meeting or exceeding the state's Algebra 1 proficiency standard. More details on the linking study methodology can be found in the individual state reports.

Step 3: Combine across states

To produce the national benchmarks, we estimate the median benchmark for each grade/term across the available states.



Why are these benchmarks different from the 2024 guidance?

NWEA's 2024 guidance document "When are students 'ready' for Algebra 1?" provided an initial starting point for Algebra 1 placement decisions.

The earlier guidance examined state EOC Algebra 1 linking studies from Georgia, Ohio, and Texas. Using the 2020 MAP Growth norms and an assumption of average growth, the guide estimated that a student would need a MAP Growth Math 6+ RIT score of 235 in the spring of seventh grade to be ready to take Algebra 1 the next year, compared to 237 in the new guidance.

The updated guidance differs in several ways that impact the benchmarks:

- The updated guidance uses a newer set of norms (2025 MAP Growth norms) based on test scores using the Enhanced item selection algorithm (EISA), which was rolled out starting in 2023.
- The updated analysis includes North Carolina in addition to Georgia, Ohio, and Texas.
- While the previous guidance used two algebra success measures (end-of-course exam proficiency and course grades), the update focuses solely on end-of-course exam proficiency.
- The updated guidance provides cut scores for a wider range of grade levels and terms.

What if I want to set a higher or lower benchmark?

The 50% probability threshold is not necessarily the correct policy standard for every district. Districts may choose a higher or lower local threshold depending on their goals, definition of success, tolerance for different placement errors, and capacity to staff teachers to teach specialized math classes.

There are tradeoffs to the decision to adjust the benchmark. A higher benchmark may cut down on advancing students who are less prepared and do not go on to succeed, but on balance it also may lead to lower identification of students who are ready and would benefit. A lower benchmark is more inclusive but might raise the risk of students taking Algebra 1 before they are ready.

NWEA, a division of HMH, supports educators worldwide by providing responsive, evidence-based assessment solutions that illuminate learning needs and fuel student growth. For more than 40 years, NWEA has developed innovative pre-K–12 assessments, including its flagship assessment, MAP Growth, and professional learning that helps educators strengthen their practice and improve student outcomes. As part of its commitment to bring valuable insights to the education community, NWEA engages in research examining issues that shine a light on inequities and other barriers to academic opportunities. Visit NWEA.org to find out how NWEA partners to help all kids learn.

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