i-Ready Assessment

Using *i-Ready* Mathematics Difficulty Indicator Cut Scores

The *i-Ready Diagnostic* is an adaptive assessment specifically designed to identify student strengths and instructional priorities. Students who score below the *i-Ready* Mathematics Difficulty Indicator (iMDI) cut score are on track to being more than one grade level below where they should be by the end of the school year in order to be considered proficient. Data from the *i-Ready Diagnostic* for Mathematics can be used with iMDI cut scores to determine which students in Grades K–8 may be experiencing a mathematics difficulty. When a student scores below the iMDI cut score, further investigation is warranted. The iMDI alone does not determine whether mathematics difficulties have a developmental or neurobiological basis or are due to other factors. These scores have been used since the 2020–2021 school year; for scores for earlier years, please contact your *i-Ready* Partner Success team.

iMDI Cut Scores

For districts and schools that want to understand which students need support in mathematics, Curriculum Associates has identified specific *i-Ready Diagnostic* for Mathematics scores for each testing window and grade. When a student has an overall mathematics score less than the corresponding score shown in the table, that could be an indicator of a possible mathematics difficulty that could require further investigation (see Table 1).

Table 1: Recommended iMDI Cut Scores
Students below these cuts may have math difficulties that require further investigation.

Grade	BOY* Diagnostic/Fall Cut	MOY* Diagnostic/Winter Cut	EOY* Diagnostic/Spring Cut
K	318	334	350
1	347	365	383
2	387	402	416
3	413	427	440
4	434	446	457
5	450	459	468
6	465	472	479
7	480	487	493
8	493	498	503

To gauge the distribution of students who would fall above and below these cut scores for each grade, use the percentile ranking that corresponds to each cut score, based on *i-Ready*'s national norms (see Table 2).

Table 2: Percentile Corresponding to Each iMDI Cut Score

Grade	BOY* Diagnostic/Fall Cut	MOY* Diagnostic/Winter Cut	EOY* Diagnostic/Spring Cut
K	15th	15th	16th
1	15th	14th	19th
2	26th	27th	30th
3	31st	27th	28th
4	26th	27th	26th
5	25th	24th	26th
6	31st	30th	30th
7	33rd	35th	37th
8	40th	41st	43rd

*BOY = Beginning of Year (Diagnostics completed between the beginning of the school year and November 15); MOY = Middle of Year (Diagnostics completed between November 16 and March 1); EOY = End of Year (Diagnostics completed between March 2 and the end of the school year)

How iMDI Cut Scores Were Determined

To determine the iMDI cut scores, Curriculum Associates used the *i-Ready* scores associated with the Diagnostic grade-level placements and the Typical Growth measures that are part of *i-Ready*'s growth model for Grades K–8.

For Grade K:

- EOY Diagnostic/spring cut scores were determined by calculating two standard errors of measurement (i.e., 12 points) below the scale score for Grade K students to be considered on grade level.
- BOY Diagnostic/fall cut scores were determined by subtracting the Typical Growth target for students who placed **One Grade Level Below** from the EOY Diagnostic/spring iMDI cut score.

For Grades 1–8:

- For the BOY Diagnostic/fall cut scores, we looked to the scale score placement tables to identify specific scores for students placing more than **One Grade Level Below** on the *i-Ready Diagnostic* for Mathematics.
- EOY Diagnostic/spring cut scores were then calculated based on the Typical Growth made by students who started the academic year **Two Grade Levels Below**.

Typical Growth measures are differentiated by students' initial placement on the *i-Ready Diagnostic*. Typical Growth values are shown below for each placement category and grade (see Table 3).

Table 3: *i-Ready Diagnostic* Typical Growth Targets by Grade and Beginning Placement Level

Grade	On Grade Level (Mid, Late, or Above)	On Grade Level (Early)	One Grade Level Below	Two Grade Levels Below	Three or More Grade Levels Below
K	21	24	32	N/A	N/A
1	21	26	29	36	N/A
2	18	22	26	29	N/A
3	21	25	26	27	30
4	19	23	23	23	24
5	14	18	18	18	20
6	13	13	14	14	15
7	11	12	12	13	13
8	9	9	9	10	12

As an example, students in Grade 1 whose overall scale score on their initial *i-Ready Diagnostic* is 347 or lower would be considered needing support with mathematics.

- For these students who meet the Typical Growth goal used to calculate the EOY Diagnostic/spring cut for Grade 1 (i.e., 36 points), their spring scale should be 347 + 36 = 383 points or higher.
- Students below this cut score would still be considered as experiencing a mathematics difficulty. MOY Diagnostic/winter cut scores reflect the midpoint between the fall and spring scores. For the Grade 1 example, the winter cut score is established as follows: (383 – 347) / 2 = 18 points; winter cut = 347 + 18 = 365.

Screening for Specific, Underlying Causes

As noted, the iMDI cut scores indicate that further investigation is warranted to determine why a student is experiencing mathematics difficulties. Once iMDI cut scores have been used to determine which students may be experiencing challenges, educators may use a variety of approaches and tools to understand the underpinning of each student's mathematics difficulties.

Using i-Ready *Mathematics Difficulty Indicator Cut Scores*.
(Curriculum Associates Research Report No. RR 2021-16). North Billerica, MA: Author.