

# Exemplar Grade 3 Mathematics Test Questions

**ACT** Aspire

PS-0

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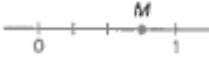
# Answer Key



This section presents the grade, question type, DOK level, alignment to the ACT Aspire reporting categories, and correct response for each of several test questions. Each question is also accompanied by an explanation of the question and by the correct response as well as improvement idea statements for ACT Aspire Mathematics.



Some test questions are appropriate at several grades: as a part of **Grade Level Progress** when the topic is new to the grade and then in later grades as a part of **Foundation** (as long as the question is at least DOK level 2 for that grade).


## Question 1

Juliana divided the part of a number line from 0 to 1 into sections of equal length. She plotted point  $M$  on the number line, as shown below. One of the following circles is shaded to represent a fraction that is equivalent to the number represented by point  $M$ . Which one?



A 
 B 

C 
 D 

E 

Question type	CCSSM topic	Correct response
Selected Response	3.NF.A, MP4, Recognize equivalent fractions and fractions in lowest terms:(N 13–15)	E

Appropriate grade level(s)	Foundation and Grade Level Progress reporting categories	Modeling	DOK level
3	Grade Level Progress > Number & Operations—Fractions	Yes	3
4–5	Foundation	Yes	3
6–EHS	Foundation	Yes	2

In this selected-response (multiple-choice) question, students must analyze the number line given and determine what fraction is being represented (CCSSM.3.NF.A.3). Because this question requires students to analyze the situation and connect different representations, it is a DOK level 3 question for the Grades 3, 4, and 5 tests. For all other ACT Aspire tests, it is a DOK level 2 question. Because students are interpreting models, this question is a part of the Modeling reporting category (MP4).

### Correct Response

After determining that the fraction at point  $M$  is  $\frac{3}{4}$ , students must then determine which of the circles provided has  $\frac{3}{4}$  of its area shaded. The circle in answer option E has 9 out of 12 equally sized sectors shaded, and  $\frac{9}{12}$  is equivalent to  $\frac{3}{4}$ .

### Improvement Idea Statements

Reporting category	Grade	Low statement (scored below ACT Readiness Range)	High statement (scored at or above ACT Readiness Range)
Grade Level Progress	3	Complete your homework when assigned. Ask questions in class.	Explain one of your assignments to a parent, grandparent, brother, or sister.
Number and Operations—Fractions	3	Work on understanding and comparing unit fractions and understanding equivalent fractions. Why is $\frac{1}{4}$ more than $\frac{1}{6}$ ?	Make a drawing that has pictures that represent 5 different fractions. Show on the drawing how you know which picture represents the greatest fraction and which represents the least fraction.
Modeling	3	Work on creating picture representations of numerical statements and use the pictures to solve problems.	Create a 3-dimensional math problem by using everyday objects to represent numbers.

