

Math Grade 8 A

Grade Level Standard(s):

KY.8.NS.1

Materials:

- Math 8 A Attainment Task Questions for Student Use

Response Code:

- Indicate the answer provided by the student.

Text Coding:

- “Quotation marks” indicate the script that the teacher should read to the student.
- *Italicized text* provides further direction for the test administrator.
- Words in parenthesis () are optional; they may replace or be read in addition to the word(s) immediately preceding.

a. $0.\overline{66}$ and $0.3425\dots$ $0.\overline{66}$ $0.3425\dots$ b. $0.3425\dots$ and $\frac{1}{2}$ $0.3425\dots$ $\frac{1}{2}$ c. $\frac{1}{2}$ and $0.\overline{66}$ $\frac{1}{2}$ $0.\overline{66}$

Before beginning task administration, please ensure that all conditions specified in the administration protocol (starting on page 10 of the Administration Guide Overview and Attainment Task Administration) have been met. Inform the student that the task is about to start by saying, “We are about to start the task, and I am going to ask you some questions.”

All questions from this task are available for presentation to the student in the supplemental material Math 8 A Attainment Task Questions for Student Use.

“Tom is watching a Pi competition. Each team names as many decimal places of Pi as they can, but they cannot name them all because the decimal does not end; it goes on indefinitely (forever). After watching the Pi competition Tom becomes curious about other numbers. He is working with fractions in class”

“Tom asks his classmate to give him two rational numbers.”

3. “Which of the following should Tom’s friend choose?”

Response Option	Response Rationale
a. $0.6\bar{6}$ and $0.3425\dots$	<i>The student identifies the repeating decimal as a rational number but does not identify the nonrepeating decimal as an irrational number.</i>
b. $0.3425\dots$ and $\frac{1}{2}$	<i>The student identifies the fraction as a rational number that has a decimal form ending in 0 but does not identify the repeating decimal as an irrational number.</i>
c. $\frac{1}{2}$ and $0.6\bar{6}$ (Correct)	<i>The student identifies the rational numbers by recognizing the fraction as a number that has a decimal form ending in 0 and the repeating decimal as rational numbers.</i>
Depth of Knowledge (DOK) 1	

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3. Which of the following should Tom's friend choose?

Kentucky Academic Standard: KY.8.NS.1 Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.
MP.2, MP.6, MP.7

Alternate Assessment Target: *Limit to numbers up to 20.*

Student Group	Number of Students*	Percent Correct
All students	514	28.40%
Gender		
Female	181	30.94%
Male	333	27.03%
Ethnicity		
African American	53	30.19%
American Indian or Alaska Native	< 10	Not Reported
Asian	< 10	Not Reported
Hispanic or Latino	37	40.54%
Native Hawaiian or Pacific Islander	< 10	Not Reported
White (non-Hispanic)	392	27.30%
Two or More Races	24	29.17%
English Learner	21	47.62%
Economically Disadvantaged	412	27.91%

*Number of Students that attempted the item