Minnesota Test of Academic Skills (MTAS)
Mathematics Released Questions
Grade 6

DEPARTMENT OF EDUCATION

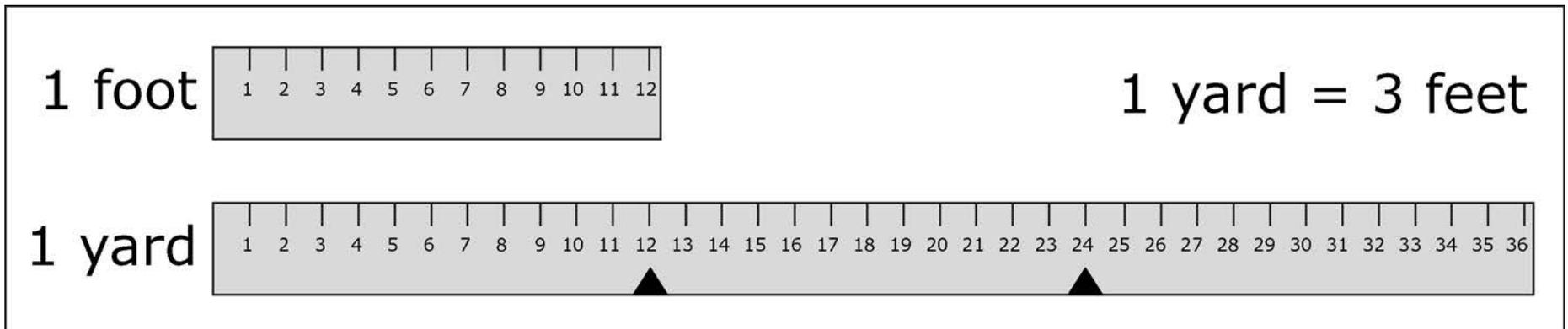# Minnesota Test of Academic Skills
Grade 6 Mathematics
Sample Task 1

Test Administrator Instructions	Score	Student Responses
Administration notes: ▪ *You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.* ▪ *Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.*		
<u>Present</u>: M6_Sample 1.1 <u>Say</u>: **One yard equals 3 feet.** *Point to each foot in the yard.* **How many feet are in 2 yards?** <u>Present</u> the answer options in order. *Point to each option as you say it.* A. 3 B. 6 C. 9	3	6 *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 3. If the student chooses an incorrect answer, continue below.*
Additional administration notes: ▪ *If the student responds incorrectly or not at all, present the task with support as scripted.* ▪ *Once additional support is provided, the task may not be re-administered for a score of 3.*		
<u>Present</u>: M6_Sample 1.2 <u>Say</u>: *Cover bottom yardstick.* **Here is a picture of 1 foot and here is a picture of 1 yard. There are 3 feet in 1 yard.** *Point to 3 consecutive 12-inch sections on yardstick while counting feet…***1 foot, 2 feet, 3 feet.** *Uncover bottom yardstick.* **Here are 2 yards. How many feet are in 2 yards?** <u>Re-present</u> the answer options in order. *Point to each option as you say it.* A. 3 B. 6 C. 9	2	6 *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 2. If the student chooses an incorrect answer, the task should be scored a 1.*
	1	3 or 9
	0	Unrelated or none

Grade 6 Math 6.3.3.1 Students will solve problems involving conversion of capacities, geometric measurements and time within measurement systems using appropriate units.

1 foot | 1 2 3 4 5 6 7 8 9 10 11 12

1 yard = 3 feet

1 yard | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

How many feet are in 2 yards?

2 yards = _____ feet

| 1 foot | 1 2 3 4 5 6 7 8 9 10 11 12 | 1 yard = 3 feet |

| 1 yard | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 |

| 1 yard | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 |
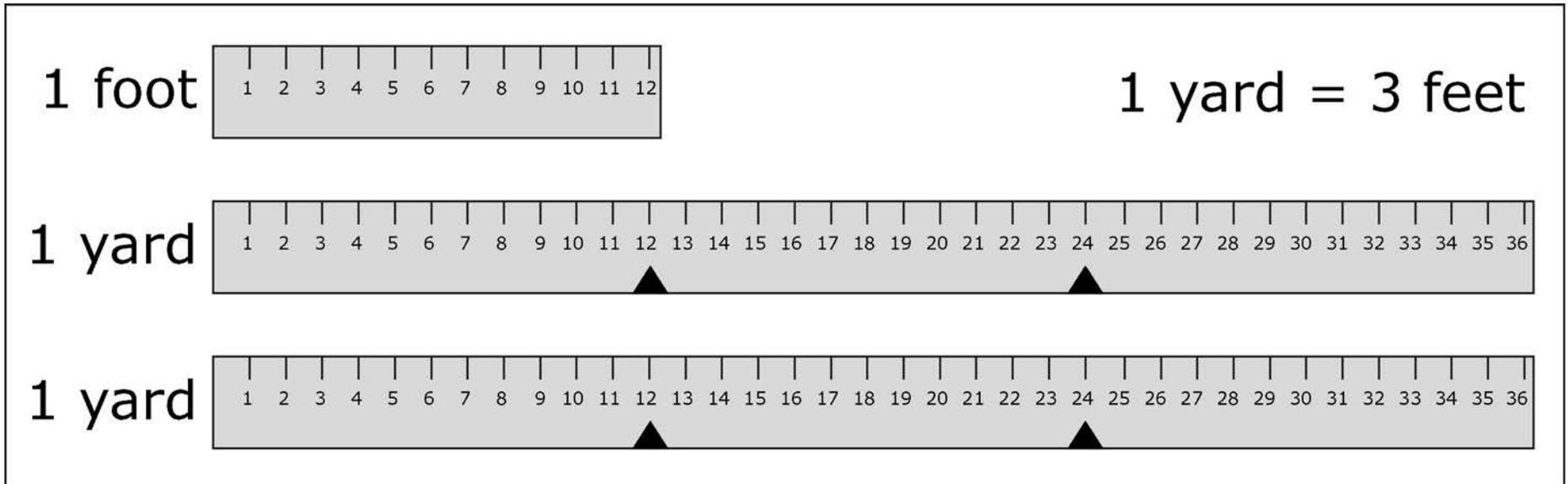
How many feet are in 2 yards?

2 yards = _____ feet

M6_Sample 1
A

3

M6_Sample 1
B

6

M6_Sample 1
C

9

Minnesota Test of Academic Skills
Grade 6 Mathematics
Sample Task 2

Test Administrator Instructions	Score	Student Responses
Administration notes: ▪ *You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.* ▪ *Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.*		
<u>Present</u>: M6_Sample 2.1 <u>Say</u>: **Here is an equation: two times five times c equals twenty** *(2 · 5 · c = 20)*. **What does c equal?** <u>Present</u> the answer options in order. *Point to each option as you say it.* **A. 2** **B. 4** **C. 10**	**3**	2 *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 3. If the student chooses an incorrect answer, continue below.*
Additional administration notes: ▪ *If the student responds incorrectly or not at all, present the task with support as scripted.* ▪ *Once additional support is provided, the task may not be re-administered for a score of 3.*		
<u>Present</u>: M6_Sample 2.2 <u>Say</u>: **The equation is two times five times c equals twenty** *(2 · 5 · c = 20)*. **To solve for c, first multiply 2 times 5. Two times five equals ten.** *Point to 10 in the picture.* **Ten times c equals twenty.** *Trace finger along the corresponding numbers.* **What does c equal?**	**2**	2 *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 2. If the student chooses an incorrect answer, the task should be scored a 1.*
<u>Re-present</u> the answer options in order. *Point to each option as you say it.* **A. 2** **B. 4** **C. 10**	**1**	4 or 10
	0	Unrelated or none

Grade 6 Math 6.2.3.2: Students will solve equations using number sense, properties of arithmetic and the idea of maintaining equality on both sides of the equation.

$$2 \cdot 5 \cdot c = 20$$

What does c equal?

$$2 \cdot 5 \cdot c = 20$$
$$10 \cdot c = 20$$
$$c = \underline{\quad}$$

What does c equal?

M6_Sample 2
A

2
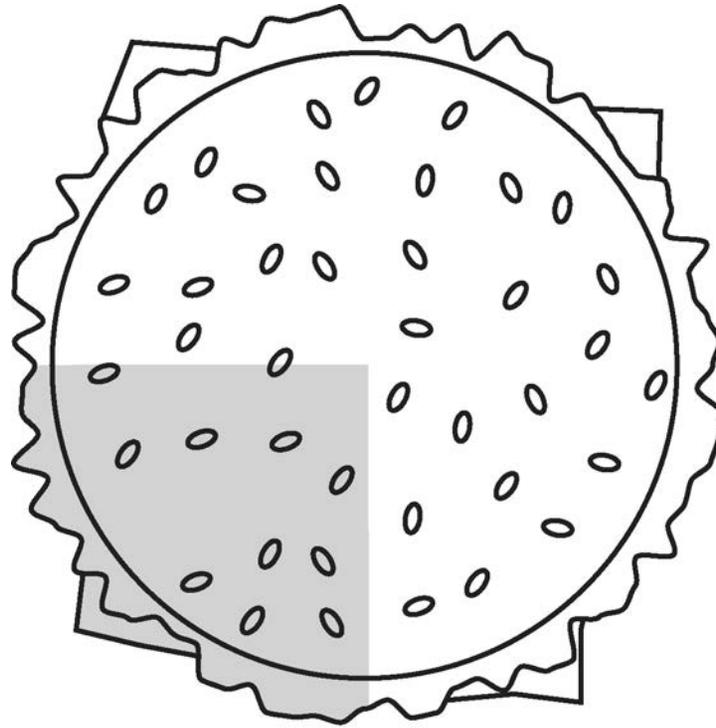
M6_Sample 2
B

4

M6_Sample 2
C

10

Minnesota Test of Academic Skills
## Grade 6 Mathematics
Sample Task 3

Test Administrator Instructions	Score	Student Responses
Administration notes: ▪ *You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.* ▪ *Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.*		
<u>Present</u>: M6_Sample 3.1 <u>Say</u>: **You ate one-fourth $(\frac{1}{4})$ of your hamburger.** *Point to the graphic for $\frac{1}{4}$ hamburger.* **Which decimal means the same as $\frac{1}{4}$?** <u>Present</u> the answer options in order. *Point to each option as you say it.* **A. Twenty-five hundredths** *(0.25)* **B. Thirty hundredths** *(0.30)* **C. Seventy-five hundredths** *(0.75)*	3	Twenty-five hundredths *(0.25)* *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 3. If the student chooses an incorrect answer, continue below.*
Additional administration notes: ▪ *If the student responds incorrectly or not at all, present the task with support as scripted.* ▪ *Once additional support is provided, the task may not be re-administered for a score of 3.*		
<u>Present</u>: M6_Sample 3.2 <u>Say</u>: **One-half $(\frac{1}{2})$ of a hamburger equals fifty-hundredths** *(0.50)***.** *Point to the graphic for $\frac{1}{2}$ hamburger.* **You only ate $\frac{1}{4}$.** *Point to the graphic for $\frac{1}{4}$ hamburger.* **Which decimal means the same as $\frac{1}{4}$?** <u>Re-present</u> the answer options in order. *Point to each option as you say it.* **A. Twenty-five hundredths** *(0.25)* **B. Thirty hundredths** *(0.30)* **C. Seventy-five hundredths** *(0.75)*	2	Twenty-five hundredths *(0.25)* *If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 2. If the student chooses an incorrect answer, the task should be scored a 1.*
	1	Thirty hundredths *(0.30)* or Seventy-five hundredths *(0.75)*
	0	Unrelated or none

Grade 6 Math 6.1.1.4 Students will identify equivalences between fractions and decimals.
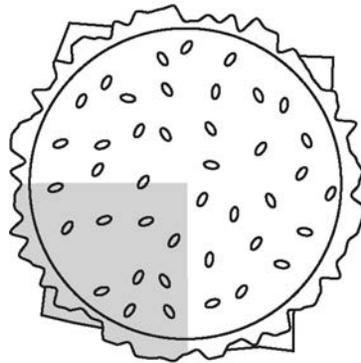
$$\frac{1}{4} = \underline{\quad ? \quad}$$

You ate $\frac{1}{4}$ of your hamburger. Which decimal means the same as $\frac{1}{4}$?
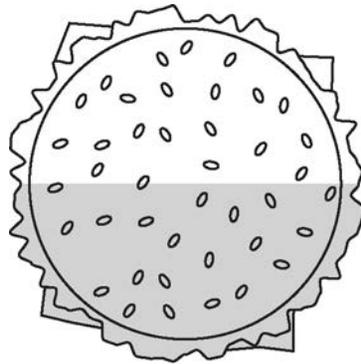
$\frac{1}{2}$ = 0.50

$\frac{1}{4}$ = ?

Which decimal means the same as $\frac{1}{4}$?

M6_Sample 3
A

0.25

M6_Sample 3
B

0.30

M6_Sample 3
C

0.75

MTAS Mathematics Object List (OPTIONAL)
Mathematics Released Questions

The MTAS Object Lists for mathematics and science include examples of objects and other variations in the presentation of the MTAS tasks. Some common ways to vary the task presentation include (1) using Braille text and tactile graphics, enlarging, or texturizing print and (2) supplementing numbers in tasks with some type of counter. These variations may be used with nearly all math and science tasks unless explicitly prohibited in the task script.

Calculators are allowed on all tasks but may be especially useful for tasks involving basic operations (addition, multiplication, subtraction, and division). Students may use **any** type of calculator on the MTAS with which they have demonstrated appropriate competence during classroom instruction.

Keep in mind that these lists provide recommendations only; test administrators may use different objects and/or text formats to make tasks more accessible for individual students as long as students are not provided with additional content information. For example, several math tasks incorporate a number line with an unlabeled point. Number lines used in classrooms may not be appropriate for all of the MTAS tasks if all points are labeled.

Please contact MDE (mde.testing@state.mn.us) if you have questions about objects that may be used to represent MTAS tasks.

Task	Objects
Grade 6 Sample 01	**Present task using objects or tactile graphics:** 1 12-inch ruler 1 yardstick **Present additional information for score 2 using objects or tactile graphics:** 1 additional yardstick **Present answer options using counters or Braille:** 3 6 9 **Note:** Total counters needed: 18 counters

Grade 6 Sample 02	**Present task using math tiles and/or tactile graphics. A calculator may also be used.** 2 · 5 · c = 20 **Present additional information for score 2 using math tiles and/or tactiles graphics to represent the second equation:** 10 · c = 20 **Present answer options using counters or Braille:** 2 4 10 **Note:** Total counters needed: 16 counters
Grade 6 Sample 03	**Present task using a fraction circle on cardstock or Thermaform/Piaf pages:** 1 fraction circle with 1 out of the 4 sections colored or textured **Present additional information for score 2 using cardstock, math tiles, or Thermaform/Piaf pages:** 1 fraction circle with 2 out of the 4 sections colored or textured $\frac{1}{2}$ = 0.50 **Present answer options using Braille:** 0.25 0.30 0.75