



# Smarter Balanced Assessment Consortium:

## Practice Test Scoring Guide Grade 3 Mathematics

05/14/2014

*Developed and published by CTB McGraw-Hill Education LLC  
Under contract with OSPI/Smarter Balanced Assessment Consortium*



Copyright © 2014 Smarter Balanced Assessment Consortium



## About the Practice Test Scoring Guides

The Smarter Balanced Mathematics Practice Test Scoring Guides provide details about the items, student response types, correct responses, and related scoring considerations for the Smarter Balanced Practice Test items. The items selected for the Practice Test are designed to reflect

- a broad coverage of claims and targets that closely mirror the summative blueprint.
- a range of student response types.
- a breadth of difficulty levels across the items, ranging from easier to more difficult items.
- a sample of performance tasks with open-ended response types that allow students to demonstrate knowledge related to critical thinking and application.

It is important to note that all student response types are not fully represented on every practice test, but a distribution can be observed across all the practice tests. The items presented are reflective of refinements and adjustments to language based on pilot test results and expert recommendations from both content and accessibility perspectives.

Within this guide, each item is presented with the following information<sup>1</sup>:

- Claim
- Domain
- Target<sup>2</sup>
- Depth of Knowledge (DOK)
- Common Core State Standards for Mathematical Content (CONTENT)
- Common Core State Standards for Mathematical Practice (MP)
- Answer key or exemplar
- Static presentation of the item
- Static presentation of student response field(s)
- Rubric and applicable score points for each item

The following items are representative of the kinds of items that students can expect to experience when taking the Computer Adaptive Test (CAT) portion of the summative assessment for Grade 3. A separate document is available that provides a Grade 3 sample performance task and scoring guide.

---

<sup>1</sup> Most of these terms (Claim, Domain, Target, DOK, etc.) are defined in various other Smarter Balanced documents, as well as the Common Core State Standards for Mathematics. Refer to the *Content Specifications for the Summative Assessment of the Common Core State Standards for Mathematics* for more information.

<sup>2</sup> When more than one target is presented, the first one listed is considered the primary target for the item.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#1	1	MD	G	2	3.MD.A.2	N/A	100

**1986**



A pencil has a mass of 25 grams. An apple has a mass that is 75 grams more than the pencil.

What is the mass of the apple, in grams?

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 100

**Rubric:** (1 point) Student enters the correct number of grams.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#2	3	OA	A	2	3.OA.C.7, 3.OA.A.4	3	See exemplar

**1988**



Does replacing the unknown number with 7 make each equation true?  
Select Yes or No for each equation.

	Yes	No
$6 \times \square = 36$	<input type="checkbox"/>	<input type="checkbox"/>
$8 \times \square = 64$	<input type="checkbox"/>	<input type="checkbox"/>
$49 \div \square = 7$	<input type="checkbox"/>	<input type="checkbox"/>
$54 \div \square = 6$	<input type="checkbox"/>	<input type="checkbox"/>

**Exemplar:** (shown at right)

**Rubric:** (1 point) Student correctly identifies if each equation is true (NNYN).

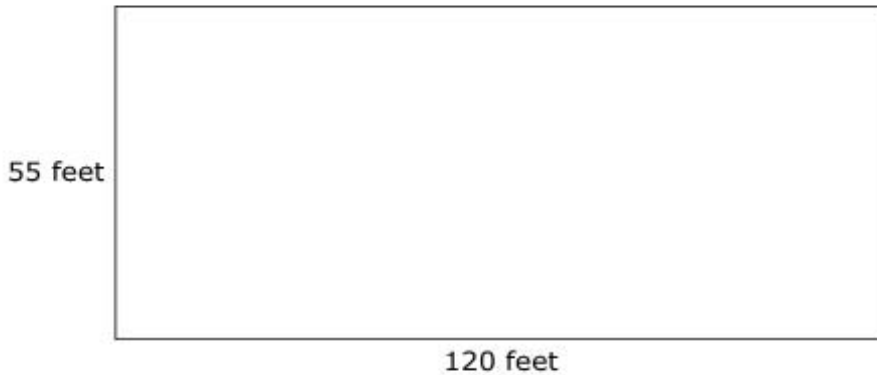
	Yes	No
$6 \times \square = 36$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$8 \times \square = 64$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$49 \div \square = 7$	<input checked="" type="checkbox"/>	<input type="checkbox"/>
$54 \div \square = 6$	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#3	1	MD	J	2	3.MD.D.8	N/A	350

**1987**



A city park is in the shape of a rectangle. The park is 120 feet wide and 55 feet long.



Enter the perimeter, in feet, of the city park.

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 350

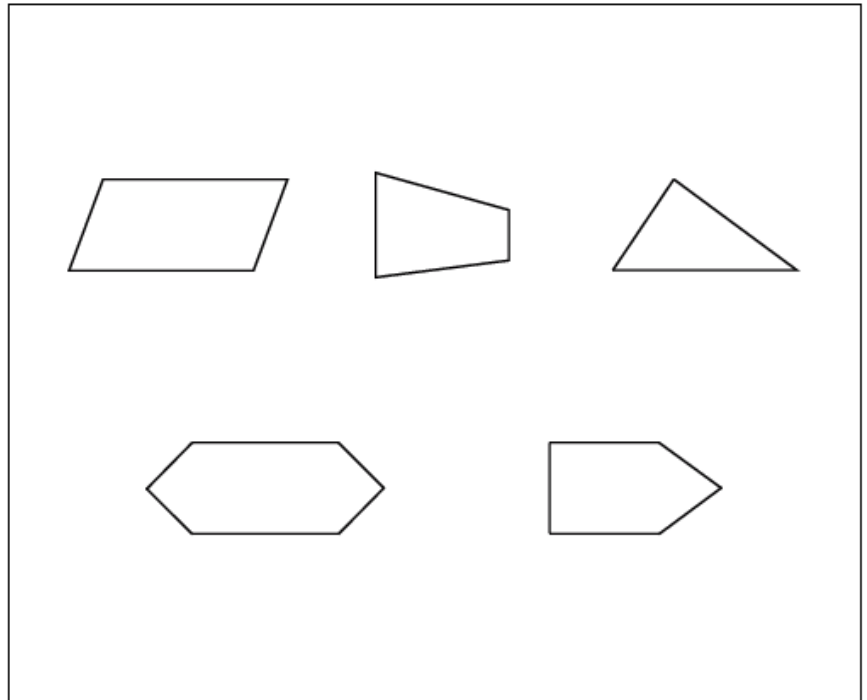
**Rubric:** (1 point) Student enters the correct number of feet.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#4	1	G	K	1	3.G.A.1	N/A	See exemplar

**2003**

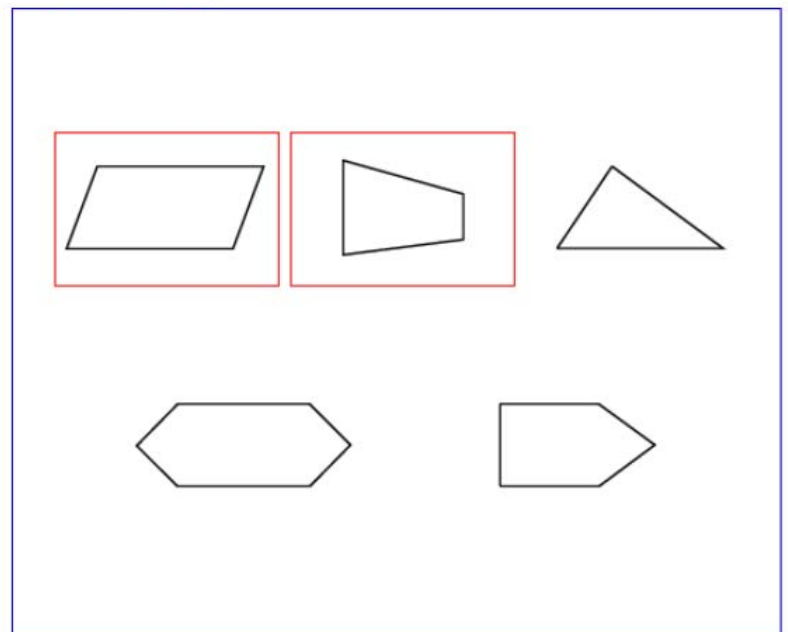


Click **all** of the shapes that are quadrilaterals.



**Exemplar:** (shown at right)

**Rubric:** (1 point) The student correctly identifies the quadrilaterals.



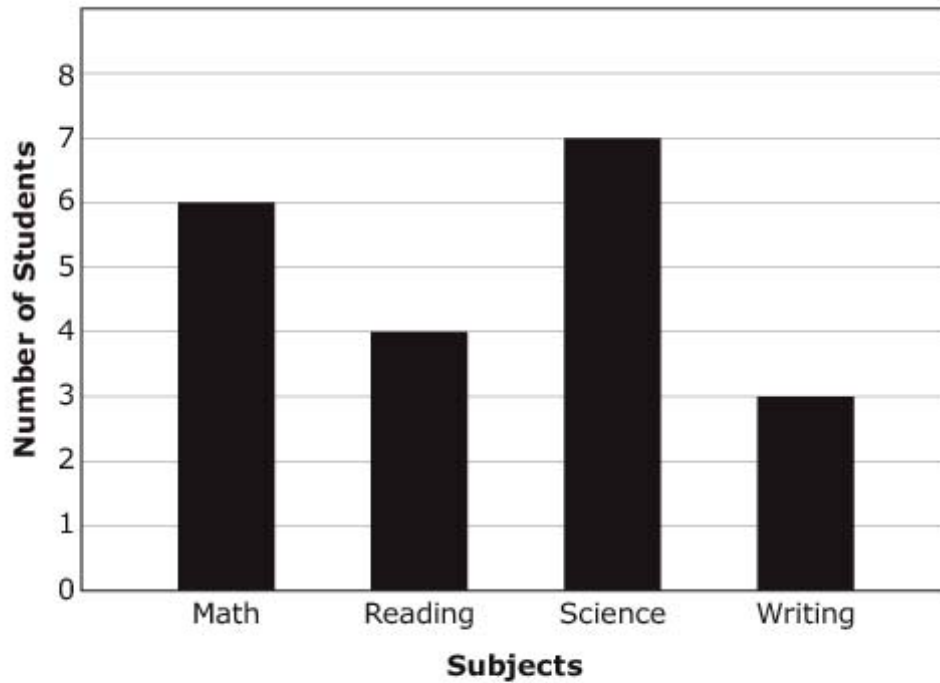
Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#5	1	MD	H	2	3.MD.B.3	N/A	3

**1976**



Students vote for their favorite school subjects. Use the bar graph to answer the question.

**Students' Favorite Subjects**



How many more students chose Math than chose Writing?

←
→
↶
↷
✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 3

**Rubric:** (1 point) Student enters the correct number of students.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#6	3	G	F	2	3.G.A.1	3, 4	See exemplar

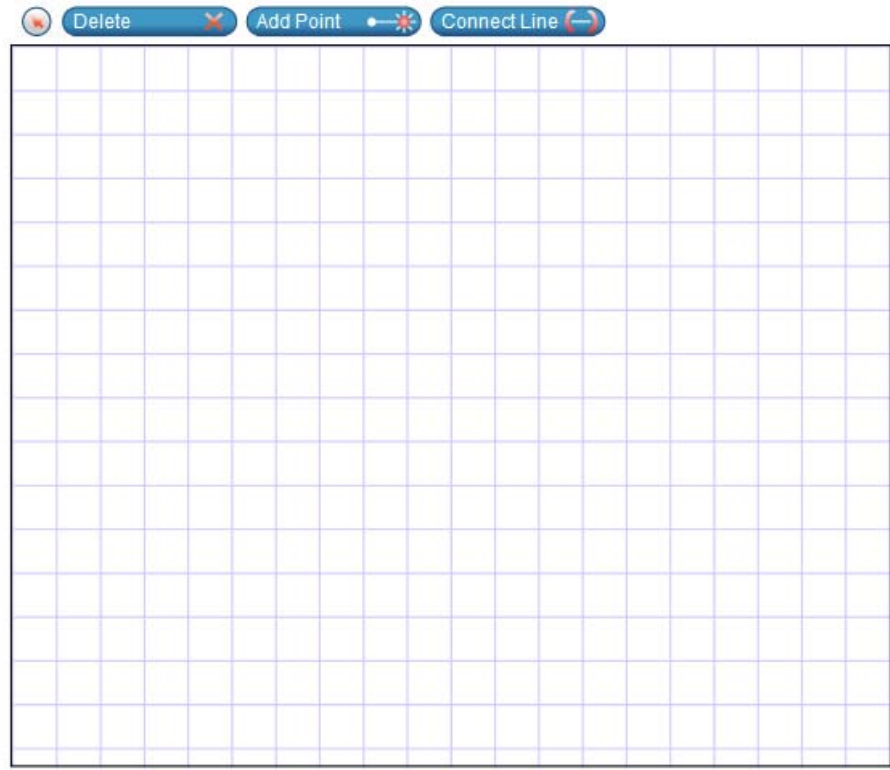
**1966**



Maya says that a rhombus cannot also be a rectangle.

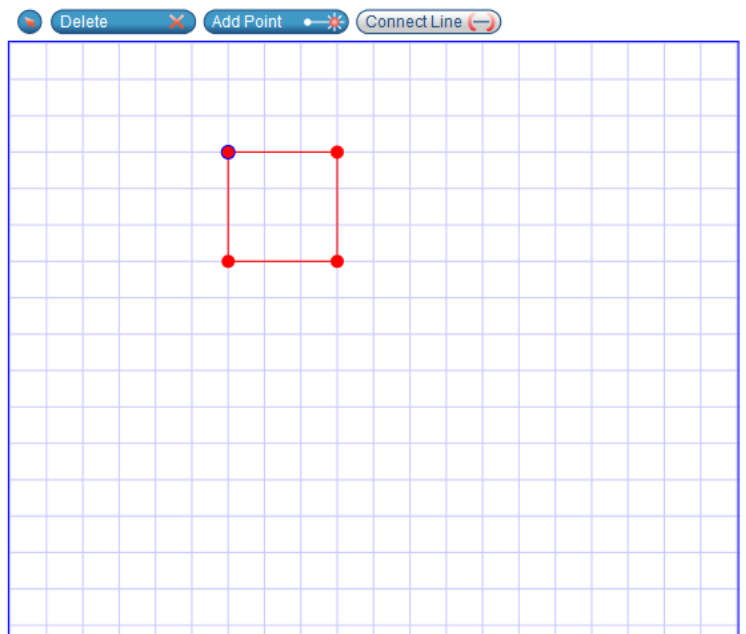
Show Maya that her statement is **not** true.

Use the Connect Line tool to draw a rhombus that is also a rectangle.



**Exemplar:** (shown at right)  
Any size square is acceptable.

**Rubric:** (1 point) Student draws a square (a rhombus that is also a rectangle).



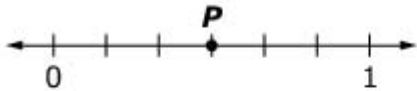


Item	Claim	Domain	Target	DOK	Content	MP	Key
#7	1	NF	F	1	3.NF.A.3a	2	See exemplar

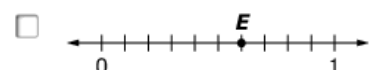
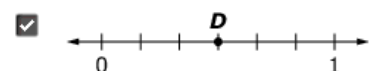
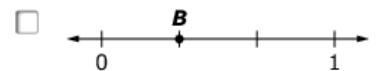
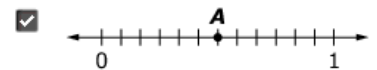
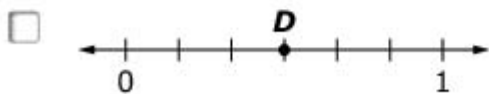
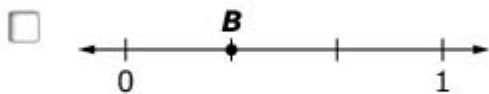
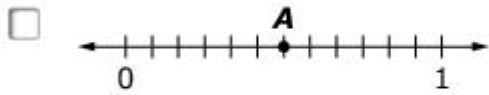
## 2015



Use this number line to solve the problem.



Choose **all** the number lines that show a number equal to the number shown by point *P*.



**Exemplar:** (shown at right)

**Rubric:** (1 point) Student selects the first and fourth options.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#8	1	OA, NBT	D	2	3.OA.D, 3.NBT.A	N/A	85

**2016**



There are 425 boys and 510 girls in Hank's school. How many more girls are there than boys?

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 85

**Rubric:** (1 point) Student enters the correct number of girls.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#9	4	OA	D	3	3.OA.D.8	4, 6	See exemplar

**2017**



Christy has \$60 to spend on plants.

She buys a peach tree for \$23 and a plum tree for \$19.

She wants to buy one more plant.

- Drag the numbers to the boxes and the symbols to the circles to create an equation to show how much money Christy has left to spend.
- Select one plant she **could** buy with the money she has left.

+
Delete

+

-

×

÷

18

19

23

37

41

60

102

=

Grapevines, \$16

Apple tree, \$18

Pear tree, \$20

Cherry tree, \$22

**Exemplar:** (shown at the right)  
Other correct responses are possible.  
Grapevines or Apple tree could be selected.

**Rubric:**  
(1 point) Student correctly completes the equation and chooses a correct plant.

Delete

60

-

23

-

19

=

18

Grapevines, \$16

Apple tree, \$18

Pear tree, \$20

Cherry tree, \$22

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#10	1	OA	B	1	3.OA.B.5	7	A

**1985**

Which expression is equal to  $3 \times 7$ ?

- Ⓐ  $(2 \times 7) + (1 \times 7)$
- Ⓑ  $(7 \times 5) - 2$
- Ⓒ  $(3 \times 4) + (3 \times 5)$
- Ⓓ  $(3 \times 4) \times 3$

**Key:** A

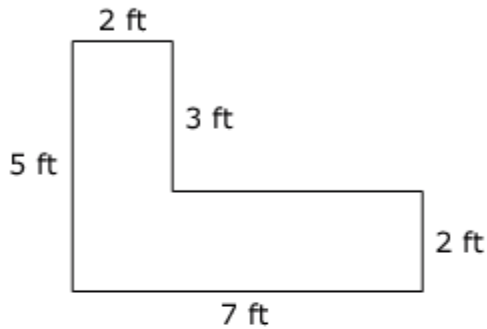
**Rubric:** (1 point) Student selects the correct expression.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#11	1	MD	I	2	3.MD.C.7d	N/A	20

**1991**



This figure is made by joining two rectangles.



Enter the area, in square feet, of the figure.

← → ↶ ↷ ✕

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 20

**Rubric:** (1 point) Student enters the correct number of square feet.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#12	1	OA	B	1	3.OA.B.6	N/A	B

**1792**

Which equation has the same unknown value as  $48 \div 6 = \square$  ?

- (A)  $6 \div 48 = \square$
- (B)  $\square \times 6 = 48$
- (C)  $48 \times \square = 6$
- (D)  $\square \div 6 = 48$

**Key:** B

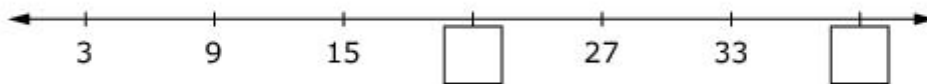
**Rubric:** (1 point) Student selects the correct equation.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#13	1	OA	D	2	3.OA.D.9	N/A	21, 39

**1994**



What unknown numbers complete the pattern on the number line?



Enter one answer in each response box.



← → ↶ ↷ ✖

1	2	3	
4	5	6	
7	8	9	
0	.	$\frac{\square}{\square}$	

**Key:** 21, 39

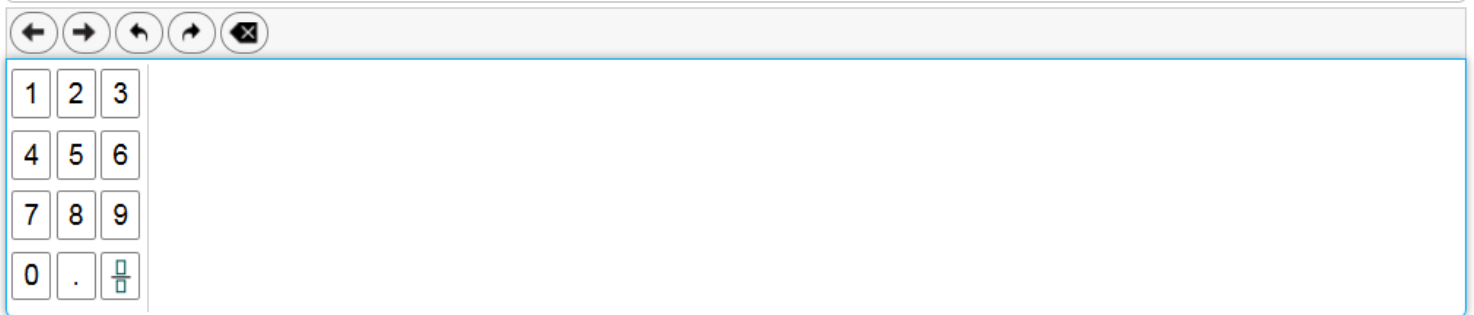
**Rubric:** (1 point) Student completes the pattern on the number line by entering two correct values.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#14	1	OA	A	2	3.OA.A.3	N/A	3

**1794**

Lindsay has 18 flowers. She plants them in 6 flower pots. Each flower pot has an equal number of flowers.

How many flowers are in each flower pot?

**Key:** 3

**Rubric:** (1 point) Student enters the correct number of flowers.

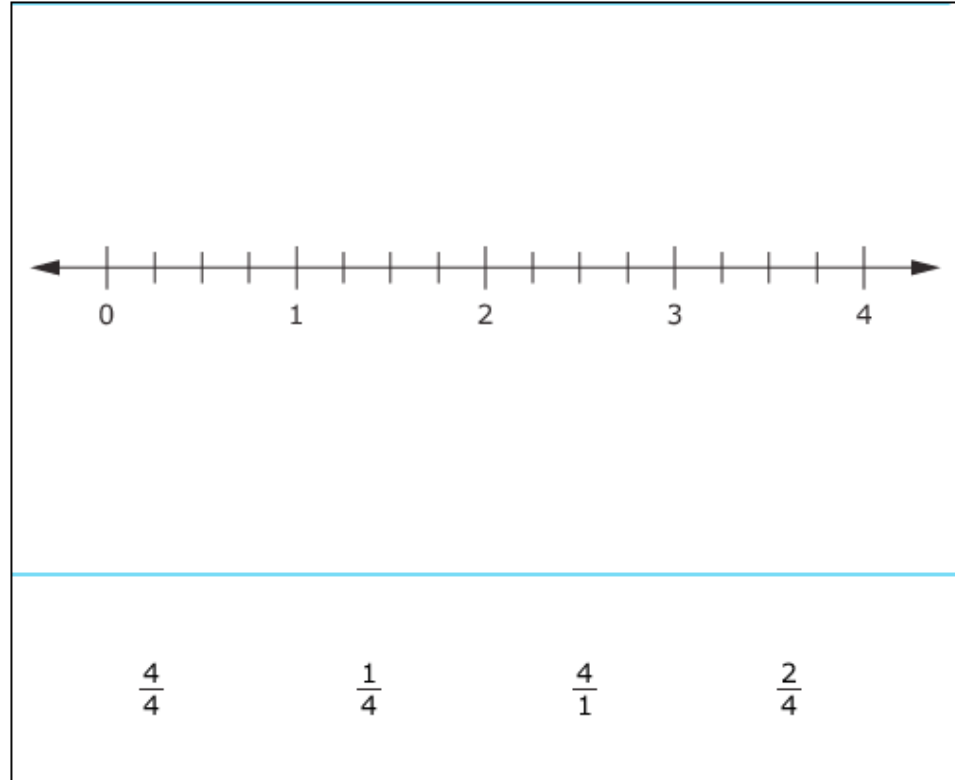


Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#15	1	NF	F	2	3.NF.A.2, 3.NF.A.3c	N/A	See exemplar

**1972**



Drag each fraction to the correct location on the number line.



**Exemplar:** (shown to the right)



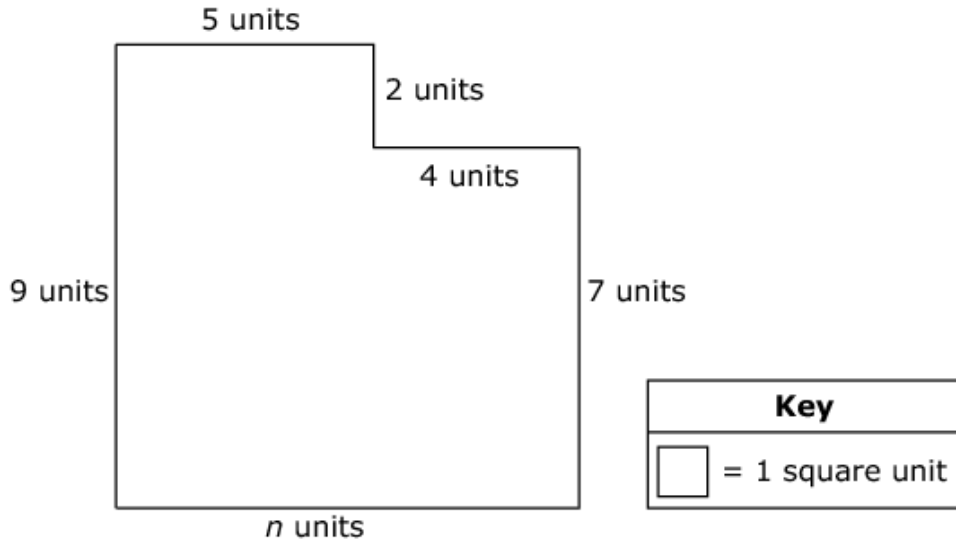
**Rubric:** (1 point) Student correctly places all four fractions on the number line.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#16	4	MD	C	3	3.MD.D.8, 3.MD.C.7b,d	4	See exemplar

**1996**



Juan draws a polygon with a perimeter of 36 units. He covers the area of the polygon with tiles that are each 1 square unit.



**Part A:** Enter an equation that could be used to find the value of  $n$  in the first response box.

**Part B:** Enter the number of tiles Juan uses to cover the polygon in the second response box.



←
→
↶
↷
✖

1	2	3	$n$
4	5	6	+ - × ÷
7	8	9	< = >
0	.	$\frac{\square}{\square}$	( )

**Exemplar:** Part A  $5 + 4 = n$  or  $n = 36 - 9 - 5 - 2 - 4 - 7$  (or equivalent equation)  
 Part B 73

**Rubric:** (2 points) Student enters a correct equation and number of tiles.  
 (1 point) Student enters a correct equation OR number of tiles.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#17	1	MD	G	1	3.MD.A.1	N/A	B

**1886**

Use this clock to answer the question.



Select the time, to the nearest minute, shown on the clock.

- (A) 4:10
- (B) 4:49
- (C) 5:10
- (D) 5:59

**Key:** B

**Rubric:** (1 point) Student selects the correct time.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#18	1	OA	A	2	3.OA.A.3	N/A	C

**1973**

Each page in a picture album has 3 rows, and there are 4 pictures in each row.

How many pictures are on each page?

- A 9
- B 11
- C 12
- D 15

**Key:** C

**Rubric:** (1 point) Student selects the correct number of pictures.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#19	1	OA	C	1	3.OA.C.7	N/A	See exemplar

**1793**



Decide if each equation is true or false. Click True or False for each equation.

	True	False
$3 \times 6 = 18 \div 2$	<input type="checkbox"/>	<input type="checkbox"/>
$4 \times 9 = 36 \div 4$	<input type="checkbox"/>	<input type="checkbox"/>
$2 \times 5 = 20 \div 2$	<input type="checkbox"/>	<input type="checkbox"/>

**Exemplar:** (shown at right)

**Rubric:** (1 point) Student correctly identifies if each equation is true or false (FFT).

	True	False
$3 \times 6 = 18 \div 2$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$4 \times 9 = 36 \div 4$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$2 \times 5 = 20 \div 2$	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#20	3	NF	A	2	3.NF.A.3d	3, 4	See exemplar

1979



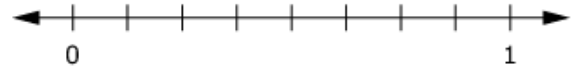
Robert says,

“When comparing two fractions with a numerator of 1, the fraction with the bigger denominator is greater.”

Drag each fraction to the correct location on the number line to find out if Robert's statement is true.

$\frac{1}{2}$   
 $\frac{1}{4}$   
 $\frac{1}{8}$

Delete



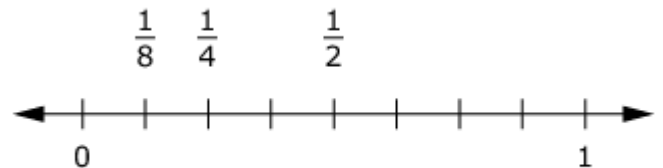
Is Robert's statement true?

Yes

No

**Exemplar:** (shown at right)

**Rubric:** (1 point) Student correctly places fractions on the number line and selects No.



Is Robert's statement true?

Yes

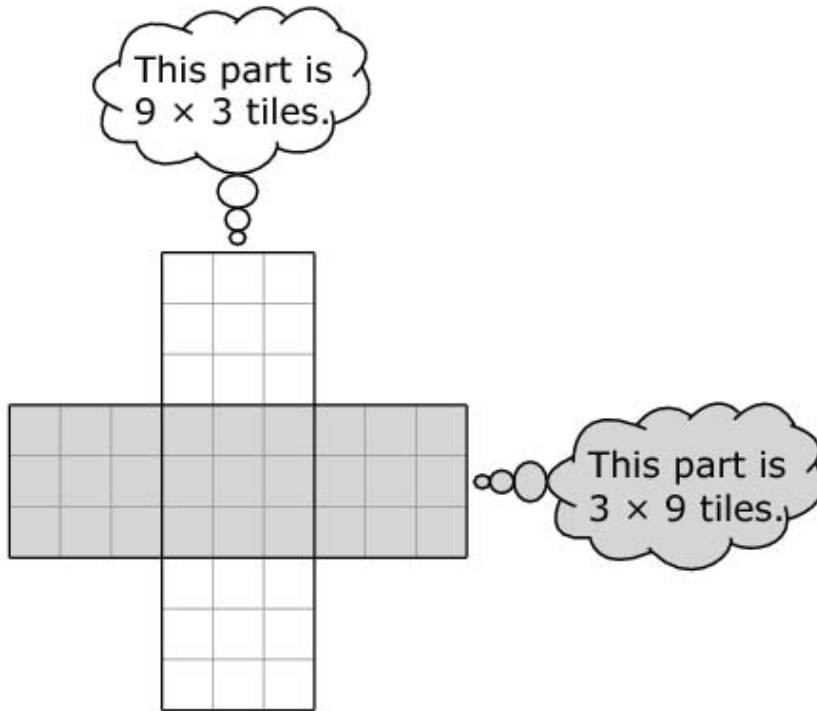
No

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#21	3	OA, MD	E	3	3.OA.B.5, 3.MD.C.7a	1, 6	D

**1888**



Tasha is doing an art project with square tiles. She needs to figure out how many tiles she will need. This picture shows her design. Tasha thinks:



Tasha says, "I need  $(9 \times 3) + (3 \times 9) = 27 + 27 = 54$  tiles to make the design."

Which statement explains why Tasha is **not** correct?

- (A)  $27 + 27$  does not equal 54.
- (B)  $(3 \times 9)$  does not equal  $(9 \times 3)$ .
- (C) Tasha multiplied  $9 \times 3$  incorrectly.
- (D) Tasha included the 9 squares in the middle twice.

**Key:** D

**Rubric:** (1 point) Student selects the correct statement.

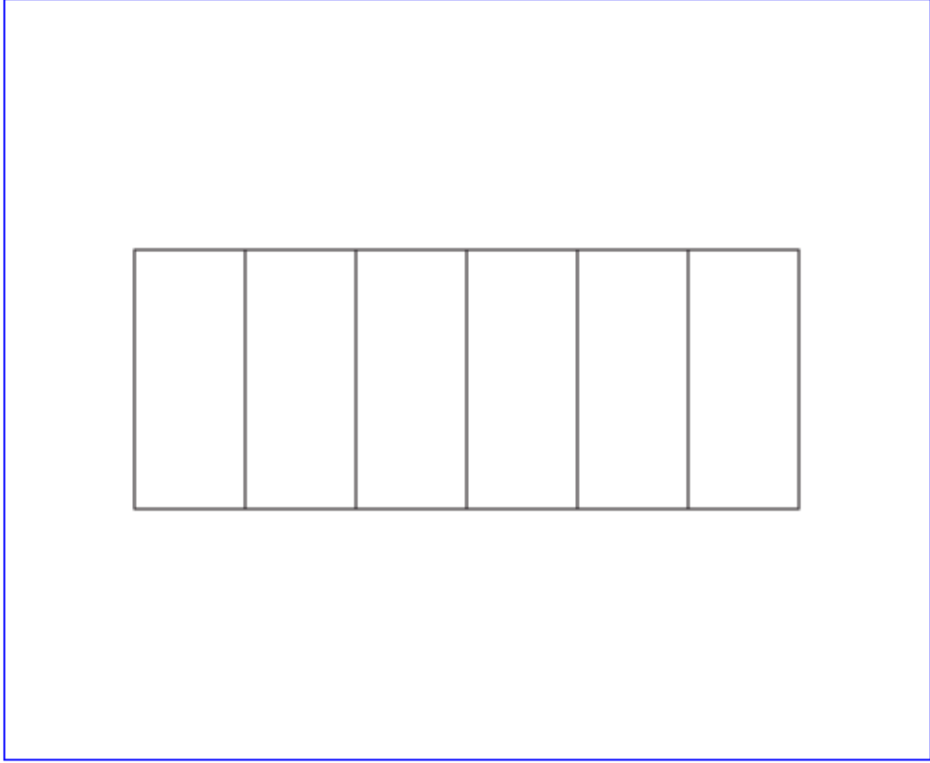
Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#22	1	NF	F	2	3.NF.A.3b	N/A	See exemplar

**1965**



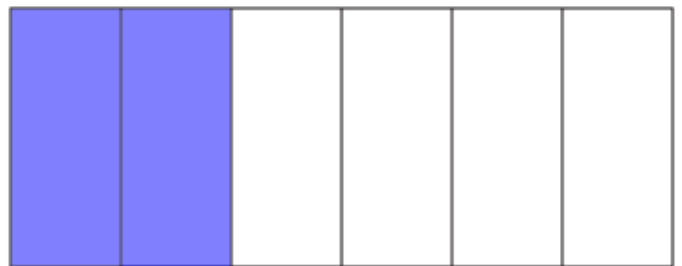
Use this model to solve the problem.

Click parts of the model to shade  $\frac{1}{3}$  of the whole model.



**Exemplar:** (shown at right)

**Rubric:** (1 point) Student correctly clicks on any two sections in the model.





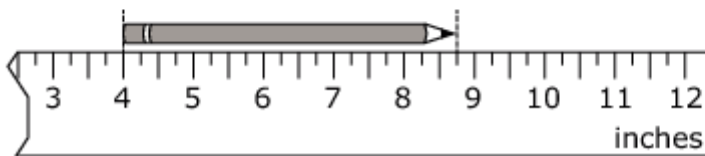
Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#23	2	MD	B	2	3.MD.B.4	5, 7	D

**2024**



Tracy has a broken ruler, but she can use it to measure the length of her pencil.

What is the length, in inches, of the pencil shown?



- (A) 8 inches
- (B)  $7\frac{3}{4}$  inches
- (C) 5 inches
- (D)  $4\frac{3}{4}$  inches

**Key:** D


**Rubric:** (1 point) Student selects the correct length.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#24	1	OA	A	1	3.OA.A.4	N/A	7

**1795**

What unknown number makes this equation true?

$$8 \times \square = 56$$

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 7

**Rubric:** (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#25	3	MD	C	2	3.MD.A.2	2	C

**2001**

Jeff has 6 markers. He estimates that the total mass of the markers is 54 grams.

Which statement could Jeff have used to make his estimate?

- Ⓐ Three markers have a mass of about 35 grams.
- Ⓑ Three markers have a mass of about 18 grams.
- Ⓒ Each marker has an equal mass of about 9 grams.
- Ⓓ Each marker has an equal mass of about 7 grams.

**Key:** C

**Rubric:** (1 point) Student selects the correct statement.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#26	1	NBT	E	1	3.NBT.A.2	N/A	648

**1975**



What unknown number makes this equation true?

$$904 - 256 = \square$$

←
→
↶
↷
✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 648

**Rubric:** (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#27	2	OA, NBT	A	2	3.OA.D.8, 3.NBT.A.3	1, 2	40

## 1977



Jen has 5 stacks of quarters. Lee has 9 stacks of quarters. Each stack of quarters is worth \$10.

How much more money, in dollars, does Lee have than Jen?

← → ↶ ↷ ✖

1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

**Key:** 40 or its equivalent

**Rubric:** (1 point) Student enters a correct value.

Item	Claim	Domain	Target	DOK	CONTENT	MP	Key
#28	4	OA	E	2	3.OA.D.8	1,2	$3 \times 8 - 2 = 22$

**1978**



Lisa has 3 pizzas. Each pizza is cut into 8 pieces. Lisa eats 2 pieces. How many pieces are left?

Write an equation to show how many pieces are left.

← → ↶ ↷ ✖

1	2	3	+	-	×	÷
4	5	6	<	=	>	
7	8	9	( )			
0	.	$\frac{\square}{\square}$				

**Key:**  $3 \times 8 - 2 = 22$  or equivalent equation

**Rubric:** (1 point) Student enters a correct equation.