Ohio | Department of Education

STUDENT READINESS ASSESSMENT ITEM RELEASE GUIDE STUDENT EDITION GRADE 3 MATHEMATICS

Grade 3
Reporting Category:

Multiplication and Division

CRITICAL AREA OF FOCUS #1
Developing understanding of multiplication and division and strategies for multiplication and division within 100.

Question _____

Mrs. Tate arranges 24 desks into rows. Each row has the same number of desks.

Complete the table to show one way that Mrs. Tate could arrange all of the desks into rows.

Number of Rows	Number of Desks in Each Row

Question _____

Andre wants to plant 72 flowers in a garden.

- The garden should have at least 3 rows of flowers.
- Each row should have the same number of flowers.
- Each row should have at least 3 flowers.

Enter numbers into the table to show two different ways that Andre can plant the flowers.

	Number of Rows	Number of Flowers in Each Row
First Way		
Second Way		

Question _____

A girl makes 36 bracelets. She gives an equal number of bracelets to each of her 9 friends.

Which expression shows how many bracelets she gives to each friend?

(A) $36 + 9$

(B) $36 - 9$

(C) 36×9

(D) $36 \div 9$

Question _____

At lunch, there are 48 third-graders. Every table in the lunchroom has the same number of chairs. Every student has a seat and every table is full.

How many tables are needed? Enter the number in the first box.

How many chairs are there at each table? Enter the number in the second box.

- There may be more than one correct answer.

Number of tables:

Number of chairs at each table:

Question _____

Miss Lewis teaches 3 dance classes. There are 9 students in each class.

How many students does Miss Lewis teach? Enter the number in the box.

Question _____

Enter the unknown value in each equation.

6	×		=	42
	÷	4	=	9
15	=		×	3
7	=	14	÷	

Question _____

Which expression is equivalent to 3×7?

Ⓐ $3+(3\times4)$

Ⓑ $3\times(3\times4)$

Ⓒ $(3\times3)+(3\times4)$

Ⓓ $(3\times3)+(4\times4)$

Question _____

An expression is shown.

$3 \times 4 \times 10$

Select the **two** expressions that are equivalent to this expression.

- ☐ 3×40
- ☐ $30 + 4$
- ☐ 12×10
- ☐ 12×40
- ☐ $10 + 12$

Question _____

Bryson has 40 books. He divides them into 5 stacks with an equal number of books in each stack.

He uses the division equation $40 \div 5 = \square$ to find how many books are in each stack.

Enter a multiplication equation that shows the number of books in each stack.

Question _____

An equation is given.

$72 \div 9 = \square$

Enter a related multiplication equation that shows the missing value.

Question _____

What is the quotient of $48 \div 6$? Enter the number in the box.

Question _____

The art teacher has 74 brushes. One art class uses 26 brushes. The rest of the brushes are put into 8 boxes. Each box has the same number of brushes.

How many brushes are in each box?

Ⓐ 6

Ⓑ 9

Ⓒ 40

Ⓓ 48

Question _____

A group of 9 people is ordering pizza. Each person will get 2 slices of pizza. Each pizza has 6 slices.

How many pizzas should the group order? Enter the number in the box.

Question _____

A pattern is given.

22, 19, 16, ___, 10, 7

What is the missing number in the pattern? Enter the number in the box.

Question _____

Jennifer has 4 packages of pens. Each package contains 20 pens.

How many pens does Jennifer have in all? Enter the number in the box.

Question _____

The number of classes and the number of students in each class at Mountain Elementary School are shown.

Complete the table to show the total number of students in each grade.

	Number of Classes	Number of Students in Each Class	Total Number of Students in Each Grade
Kindergarten	6	30	
First Grade	2	20	
Second Grade	4	20	
Third Grade	3	30	

Question _____

There are 9 students in the art club. The teacher gave each student 10 feathers.

What is the total number of feathers that the teacher gave to the students? Enter the number in the box.

Grade 3
Reporting Category:

Numbers and Operations

CRITICAL AREA OF FOCUS #5
Solving multi-step problems.

Question _____

What is 761 rounded to the nearest hundred? Enter the number in the box.

Question _____

This question has two parts. First, answer part A. Then, answer part B.

A. Round 436 to the nearest 10. Enter the number in the first box.

B. Round 436 to the nearest 100. Enter the number in the second box.

A.

B.

Question _____

Ryan wrote a number on his paper.

- His number rounds to 350 when rounded to the nearest ten.
- His number rounds to 300 when rounded to the nearest hundred.

Enter a number that Ryan could have written.

Question _____

An equation is shown.

$263 - 115 - 36 = \square$

What is the missing number? Enter the number in the box.

Question _____

Enter a number to complete the equation.

166	+		=	378

Question _____

Mr. Burrows starts mowing the lawn at 12:05 p.m. He also does the following:

- He stops to eat lunch 45 minutes after he starts mowing the lawn.
- After lunch, he mows the lawn for 35 more minutes.
- He finishes mowing the lawn at 1:45 p.m.

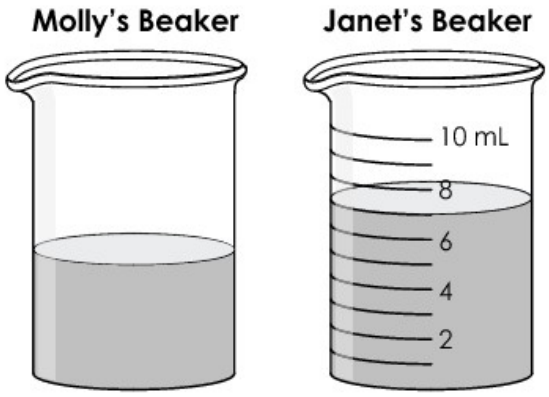
A. What time does Mr. Burrows begin eating lunch?

B. How long, in minutes, did it take him to eat lunch?

A.		:		p.m.
B.			minutes	

Question _____

Molly and Janet have beakers of the same size. The beakers are filled with different amounts of water as shown.



Janet's beaker contains 7 milliliters (mL) of water.

About how many milliliters of water does Molly's beaker contain?

(A) 2 mL

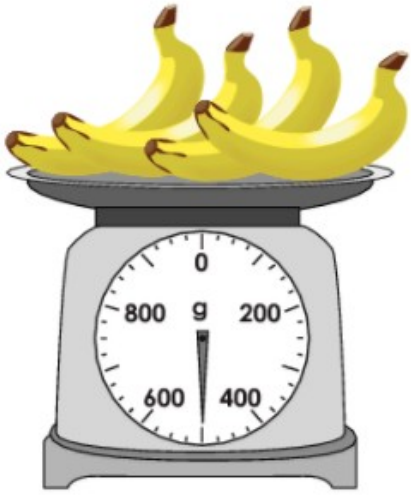
(B) 5 mL

(C) 7 mL

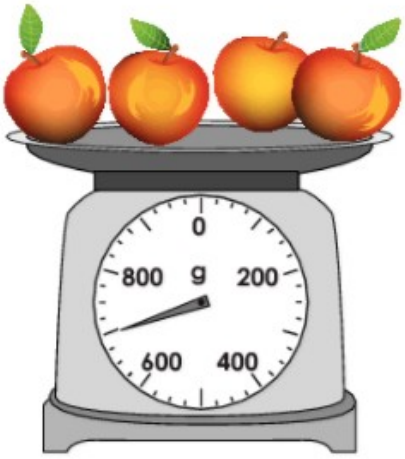
(D) 9 mL

Question _____

A student is comparing the mass of four bananas to the mass of four apples.



Bananas



Apples

What is the difference in mass, in grams (g), between the bananas and the apples?

Ⓐ 200 g

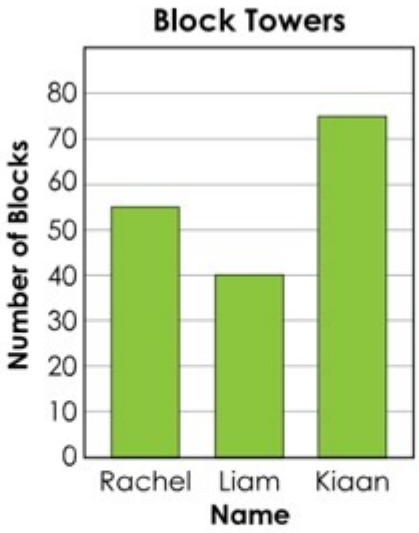
Ⓑ 500 g

Ⓒ 700 g

Ⓓ 1,200 g

Question _____

Rachel, Liam, and Kiaan are stacking blocks. They want to see who can build the tallest tower of blocks without it falling over. They each record their number of blocks on the graph shown.



How many total blocks did Rachel, Liam, and Kiaan use to build their towers?

Ⓐ 130

Ⓑ 160

Ⓒ 170

Ⓓ 180

Question _____

Yang has an apple tree. He records how many apples he picks each day in the table shown.

Number of Apples Picked

Monday	4
Tuesday	6
Wednesday	2
Thursday	8
Friday	10

Create a picture graph to represent the data.

A. Select a number for the scale of the picture graph.

B. Select apples in each row to create the picture graph.

- There may be more than one correct answer.

A. Select a scale for the graph.

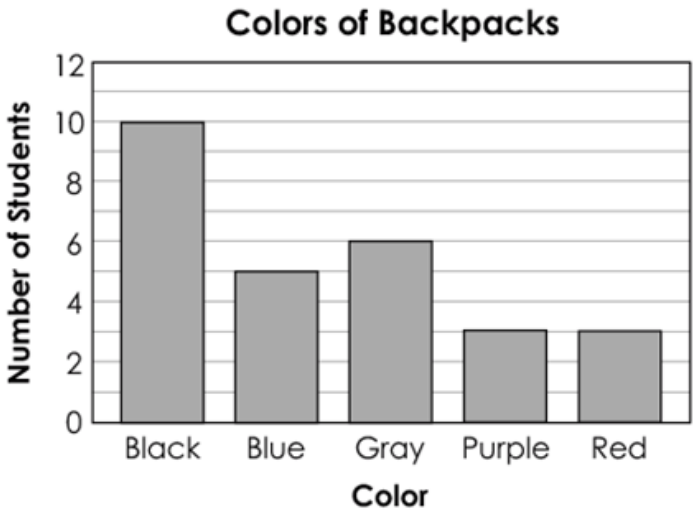
2 3 4

B. Number of Apples Picked

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Question _____

The graph shows the colors of students' backpacks in a third-grade class.



How many more students have black backpacks than have blue backpacks? Enter the number in the box.

Grade 3
Reporting Category:

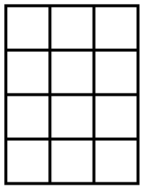
Geometry

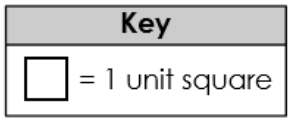
CRITICAL AREA OF FOCUS #3
Developing understanding of the structure of rectangular arrays and of area.

CRITICAL AREA OF FOCUS #4
Describing and analyzing two-dimensional shapes.

Question _____

A diagram is shown.





Which measure would be found by counting all the unit squares in the rectangle?

Ⓐ area

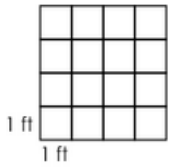
Ⓑ length

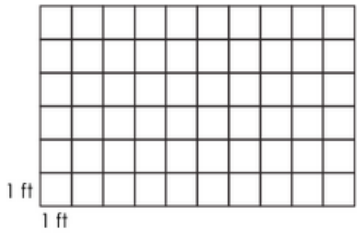
Ⓒ volume

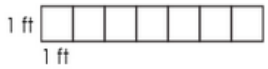
Ⓓ perimeter

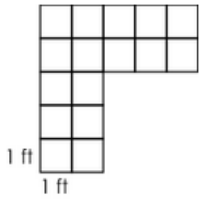
Question _____

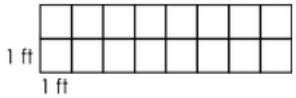
Select the **three** shapes that each have an area of 16 square feet.

☐ 

☐ 

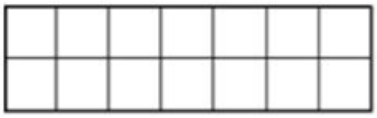
☐ 

☐ 

☐ 

Question _____

A rectangle is shown.



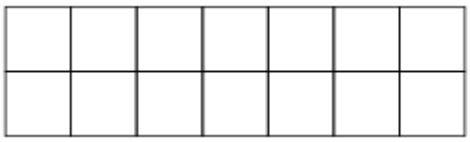
= 1 square meter

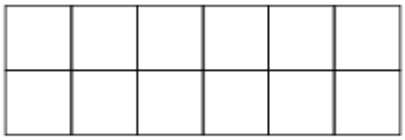
What is the area, in square meters, of the rectangle? Enter the number in the box.

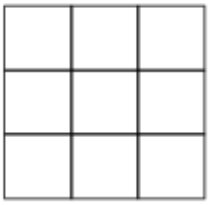
square meters

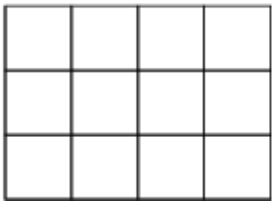
Question 15

Select the **two** rectangles that have an area of 12 square units.



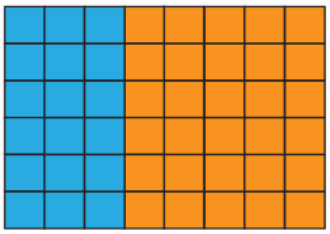


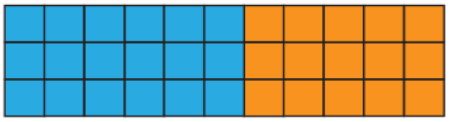


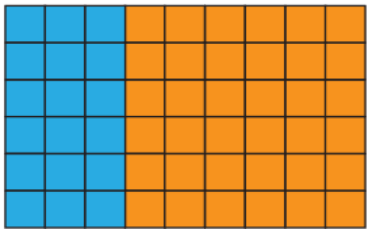


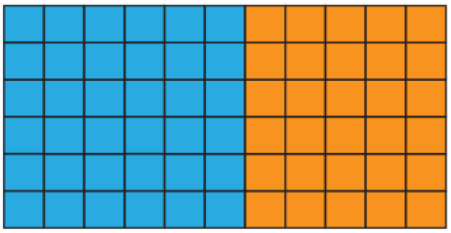
Question _____

Which area model represents the expression $(3 \times 6) + (3 \times 5)$?

Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ 

Question _____

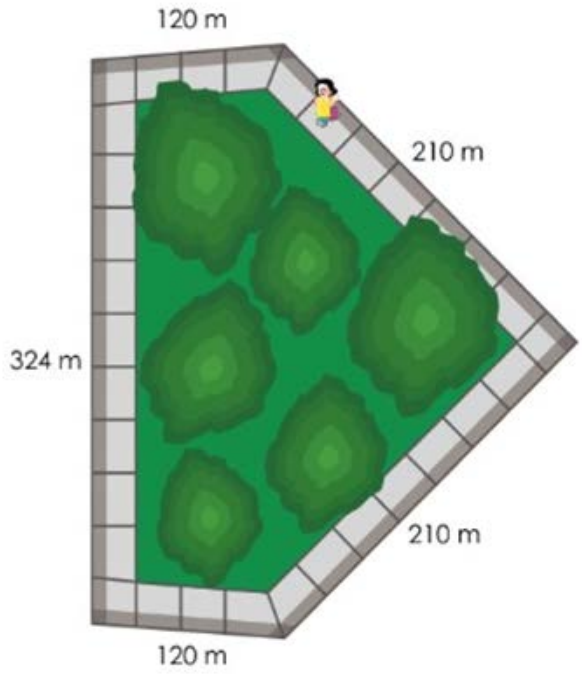
A rectangle has a width of 6 feet and an area of 48 square feet.

What is the length, in feet, of the rectangle? Enter the number in the box.

_____ *feet*

Question _____

A girl walks around the perimeter of a park, as shown.

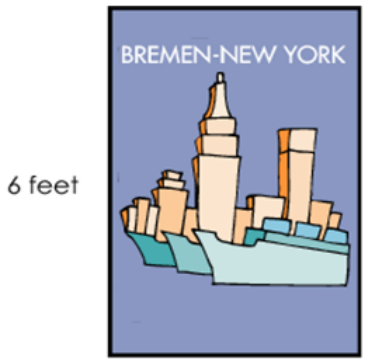


What is the perimeter, in meters (m), of the park? Enter the number in the box.

_____ *meters*

Question _____

An artist made a poster that is 6 feet tall and 4 feet wide.



What is the perimeter, in feet, of the poster? Enter the number in the box.

_____ *feet*

Question _____

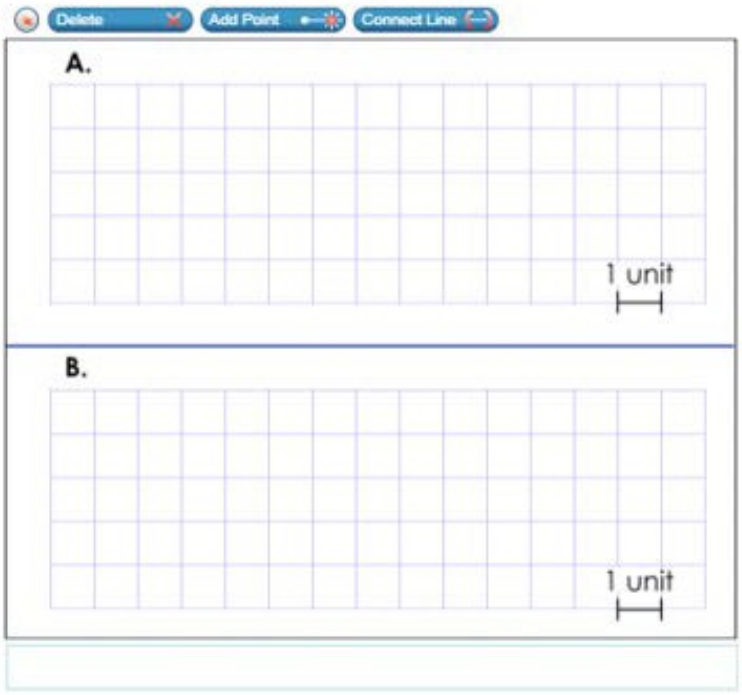
Carl creates a rectangle with an area of 12 square units and a perimeter of 14 units.

A. In the top box, use the Connect Line tool to create a rectangle with

- the same area as Carl's rectangle, but
- a different perimeter.

B. In the bottom box, use the Connect Line tool to create a rectangle with

- the same perimeter as Carl's rectangle, but
- a different area.



Question _____

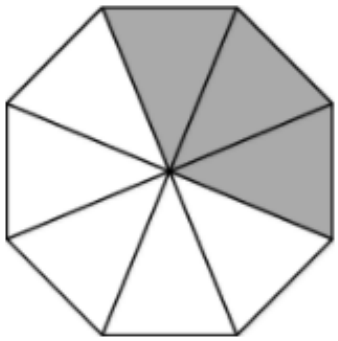
A shape is shown.

Select the **two** words that describe this shape.

- [ ] triangle
- [ ] hexagon
- [ ] rectangle
- [ ] pentagon
- [ ] quadrilateral

Question _____

A shape is divided into equal parts as shown.



Enter a fraction that represents the shaded area of the shape.

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

Grade 3
Reporting Category:

Fractions

CRITICAL AREA OF FOCUS #2
Developing understanding of fractions, especially unit fractions (fractions with numerator 1).

Question _____

Which stick has a length of $\frac{1}{2}$ inch?

Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ 

Question _____

Complete the sentence to create a true statement about the fraction $\frac{1}{3}$.

The fraction $\frac{1}{3}$ describes [ ] when a whole is divided into [ ]

Drop down choices:

The fraction $\frac{1}{3}$ describes [ ] when a whole is divided into [ ]

describes	when a whole is divided into
1 part	1 equal part.
2 parts	2 equal parts.
3 parts	3 equal parts.

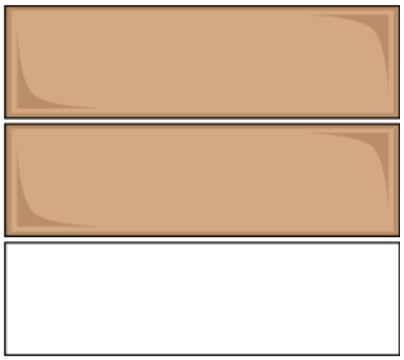
Question _____

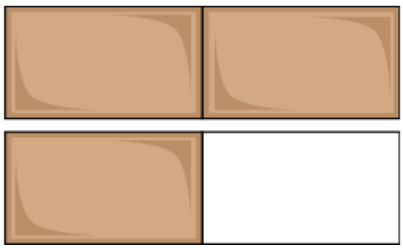
A girl has the candy bar shown.

She breaks it into thirds. She gives $\frac{1}{3}$ of the candy bar to a friend.

Which model shows the fraction of the candy bar the girl has left?

Ⓐ 

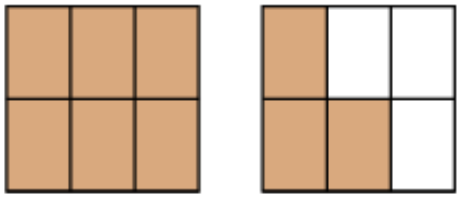
Ⓒ 

Ⓑ 

Ⓓ 

Question _____

A fraction model is shown.



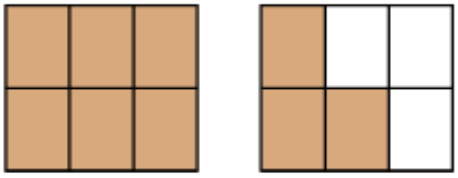
A. What fraction represents the shaded area of the fraction model?

B. Explain how you found your answer.

Type your answer in the space given.

Question _____

A fraction model is shown.



A. What fraction represents the shaded area of the fraction model?

B. Explain how you found your answer.

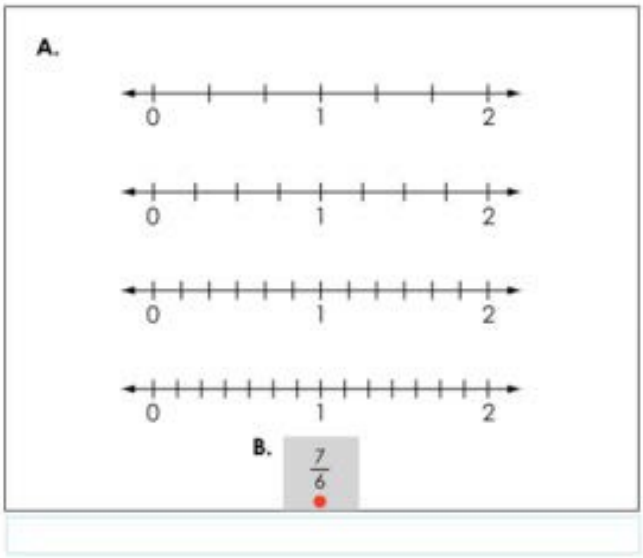
Type your answer in the space given.

Question _____

Several number lines are shown.

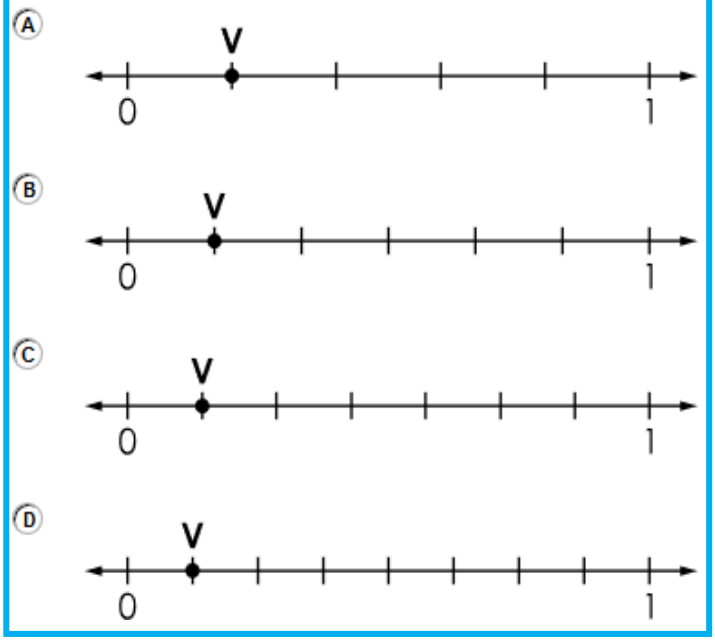
A. Select the number line that can best be used to plot $\frac{7}{6}$.

B. Move the fraction to the number line you selected to correctly plot $\frac{7}{6}$.



Question _____

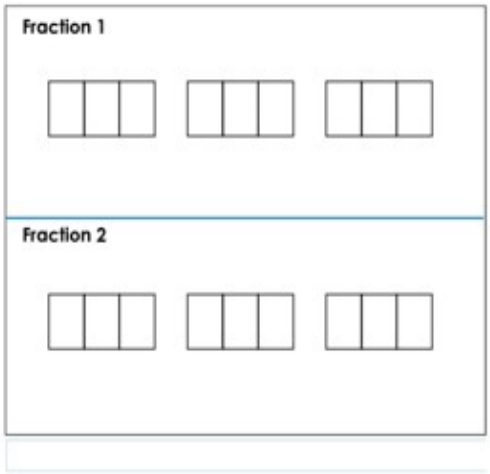
Which number line shows point V located at $\frac{1}{6}$?



Question _____

This item has three parts.

Part A. Create models for two **different** fractions that are greater than 1.



Part B. Select the words that correctly complete each sentence.

- Fraction 1 has [ ] parts of the wholes shaded than Fraction 2.
- The parts in Fraction 1 are [ ] the parts in Fraction 2.
- Fraction 1 is [ ] Fraction 2.

Part C. Which statement correctly compares the two fractions?

Ⓐ Fraction 1 > Fraction 2

Ⓑ Fraction 1 = Fraction 2

Ⓒ Fraction 1 < Fraction 2

Drop down choices:

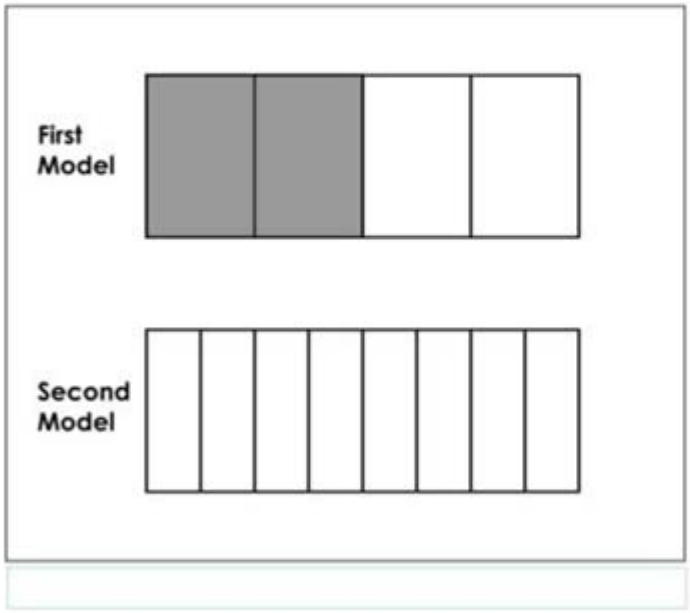
- Fraction 1 has [ ] parts of the wholes shaded than Fraction 2.
  - more
  - fewer
- The parts in Fraction 1 are [ ] the parts in Fraction 2.
  - the same size as
  - larger than
  - smaller than
- Fraction 1 is [ ] Fraction 2.
  - greater than
  - less than

Question _____

This item has two parts.

Vince wants to find a fraction that is equivalent to $\frac{2}{4}$. He creates the first model, as shown.

Part A. Select parts of the second model so that the two models represent equal fractions.



Part B. Based on the second model, what fraction is equivalent to $\frac{2}{4}$?