



Smarter Balanced Assessment Consortium:

Mathematics Practice Test Scoring Guide
Grade 3

08/01/2016



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.

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 information¹:

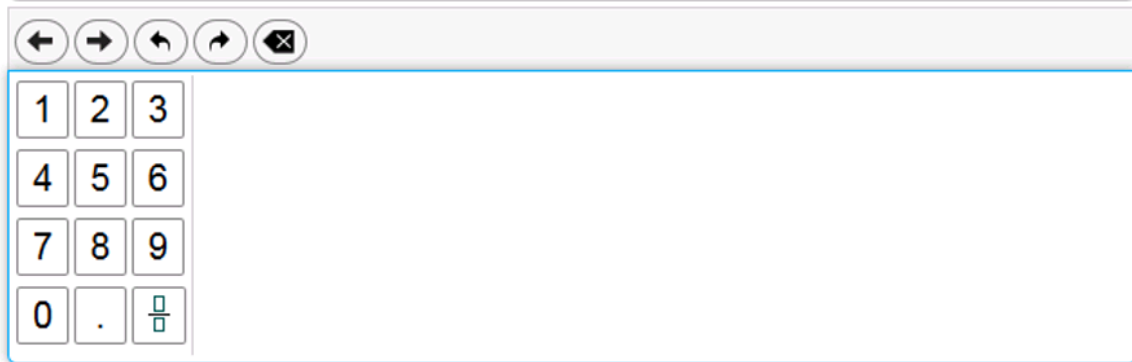
- Claim: statement derived from evidence about college and career readiness
- Domain: a broad content area that contains related targets and standards (i.e., Geometry)
- Target: statement that bridges the content standards and the assessment evidence that supports the claim
- Depth of Knowledge (DOK): measure of complexity considering the student's cognitive process in response to an item. There are four DOK levels, a 4 being the highest level.
- Common Core State Standards for Mathematical Content (CCSS-MC)
- Common Core State Standards for Mathematical Practice (CCSS-MP)
- Static presentation of the item: static presentation of item from test administration system
- Static presentation of student response field(s): static presentation of response field from test administration system
- Answer key or exemplar: expected student response or example response from score point value
- Rubric and applicable score points for each item: score point representations for student responses

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.

¹ Most of these terms (Claim, Domain, Target, DOK, etc.) are further 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.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#1	1	OA	D	2	3.OA.D.8	N/A

Megan baked 28 sugar cookies and 24 chocolate chip cookies.
Enter the total number of cookies Megan baked in all.



Key: 52

Rubric: (1 point) The student enters the correct number of cookies.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#2	1	NBT	E	1	3.NBT.A.2	N/A

What unknown number makes this equation true?

$$\square = 881 - 72$$

←
→
↶
↷
✖

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

Key: 809

Rubric: (1 point) The student enters the correct number.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#3	1	OA	A	1	3.OA.A.3	N/A

There are 5 rows of trading cards with 3 trading cards in each row.
How many trading cards are there?

← → ↶ ↷ ✖

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

Key: 15

Rubric: (1 point) The student enters the correct number of trading cards.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#4	3	OA	F	2	3.OA.B	2, 4

Which expression is equal to 6×3 , and why?

- Ⓐ $6 + 3$, because the numbers are in the same order
- Ⓑ $6 \div 3$, because division and multiplication are inverse operations
- Ⓒ $3 + 6$, because the order of the numbers does not matter in addition
- Ⓓ 3×6 , because the order of the numbers does not matter in multiplication

Key: D

Rubric: (1 point) The student identifies the correct expression and reason.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#5	1	OA	A	1	3.OA.A.3	N/A

Jack has 24 fish. He puts them into 4 bowls. Each bowl has an equal number of fish.

How many fish are in each bowl?

← → ↶ ↷ ✖

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

Key: 6

Rubric: (1 point) The student enters the correct number of fish.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#6	1	MD	G	1	3.MD.A.1	N/A

Look at the time on this clock.



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

- (A) 7:42
- (B) 8:33
- (C) 9:33
- (D) 6:42

Key: D

Rubric: (1 point) The student selects the correct time.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#7	2	NBT	C	2	3.NBT.A.2	1, 2

The table shows the number of books in four third-grade classrooms. One of the teachers is Tim’s teacher, and one of the teachers is Sue’s teacher.

Teacher	Number of Books
Mr. Smith	136
Ms. Rose	148
Mr. Brown	172
Mrs. Lee	122

Tim’s teacher has 26 more books than Sue’s teacher.

Who is Tim’s teacher?

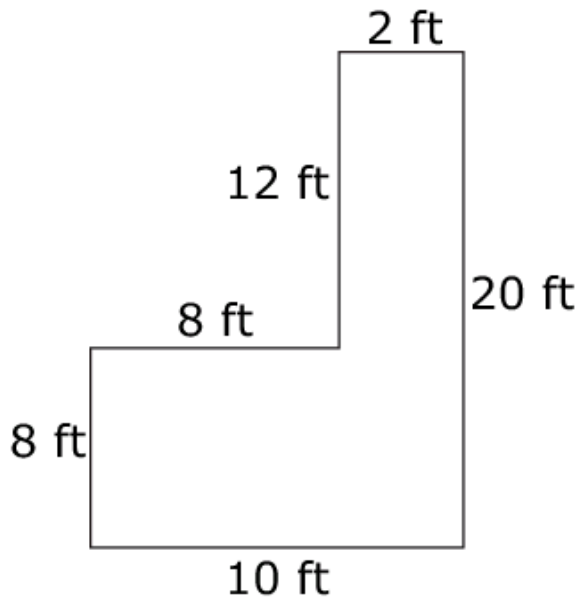
- Ⓐ Mr. Smith
- Ⓑ Ms. Rose
- Ⓒ Mr. Brown
- Ⓓ Mrs. Lee

Key: B

Rubric: (1 point) The student selects the correct teacher.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#8	1	MD	J	1	3.MD.D.8	N/A

The side lengths of a shape are shown.



Enter the perimeter, in feet, of the shape.

←
→
↶
↷
✖

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

Key: 60

Rubric: (1 point) The student enters the correct perimeter of the shape.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#9	1	NF	F	1	3.NF.A.3	N/A

What number goes in the box to make the equation true?

$$\frac{\square}{1} = 5$$

←
→
↶
↷
✖

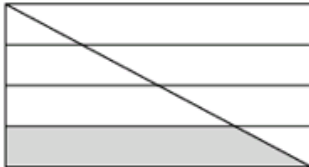
1	2	3
4	5	6
7	8	9
0	.	$\frac{\square}{\square}$

Key: 5 or equivalent

Rubric: (1 point) The student enters a correct number.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#10	3	NF	D	2	3.NF.A.1	3

Jamie drew this shape.



She says, "I divided the shape into 8 parts. I shaded 1 part. So $\frac{1}{8}$ of the shape is shaded."

Is Jamie correct? Select the statement that explains why.

- A Yes, because there is 1 large piece shaded.
- B Yes, because the shape is divided into 8 parts.
- C No, because the 8 parts should be the same size.
- D No, because there should be 1 medium piece shaded.

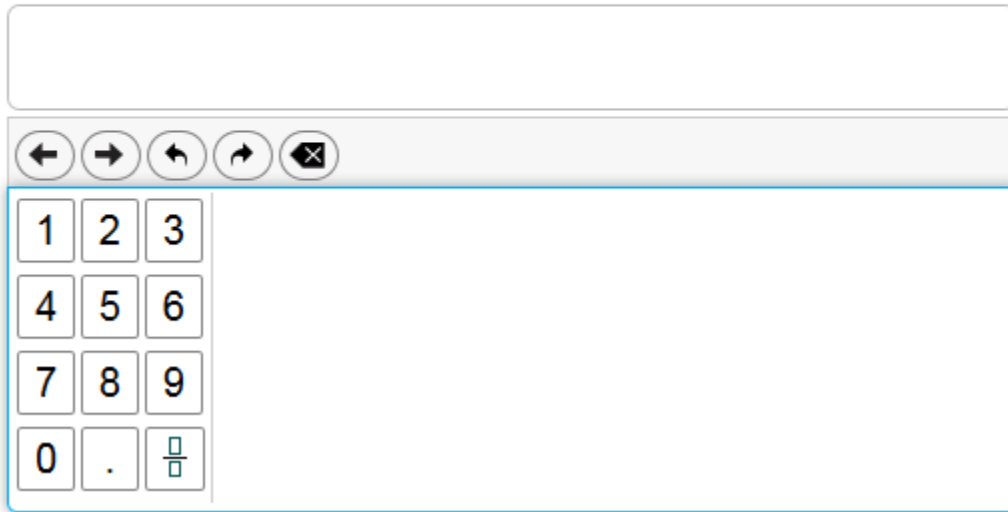
Key: C

Rubric: (1 point) The student selects the correct statement.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#11	1	OA	A	1	3.OA.A.4	N/A

What unknown number makes this equation true?

$$6 \times 8 = \square$$



The calculator interface includes a top row of navigation buttons: left arrow, right arrow, undo, redo, and a clear button (X). Below these is a numeric keypad with buttons for digits 1-9, 0, a decimal point, and a fraction template button.

Key: 48

Rubric: (1 point) The student enters the correct number.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#12	1	OA	B	1	3.OA.B.6	N/A

Which equation has the same unknown value as $30 \div \square = 6$?

Ⓐ $6 \times 30 = \square$

Ⓑ $6 \div 30 = \square$

Ⓒ $6 \times \square = 30$

Ⓓ $6 \div \square = 30$

Key: C

Rubric: (1 point) The student selects the correct equation.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#13	1	OA	D	2	3.OA.D.9	N/A

Part of a multiplication table is shown.

What two numbers correctly complete the pattern in the table?

Enter your answers in the table.

12	15	18	21
16	<input type="text"/>	24	28
20	<input type="text"/>	30	35
24	30	36	42

Key: 20 in the first row and 25 in the second row

Rubric: (1 point) The student enters the correct numbers.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#14	1	OA	C	1	3.OA.C.7	N/A

Decide whether each equation is true or false.

Click True or False for each equation.

	True	False
$8 \times 2 = 4 \times 6$	<input type="checkbox"/>	<input type="checkbox"/>
$7 \times 3 = 3 \times 7$	<input type="checkbox"/>	<input type="checkbox"/>
$5 \times 6 = 3 \times 10$	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown at right)

Rubric: (1 point) The student correctly identifies the true equations.

	True	False
$8 \times 2 = 4 \times 6$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$7 \times 3 = 3 \times 7$	<input checked="" type="checkbox"/>	<input type="checkbox"/>
$5 \times 6 = 3 \times 10$	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#15	1	OA	C	1	3.OA.C.7	N/A

Enter the unknown numbers that make each equation true.

Enter the first unknown number in the first box.

Enter the second unknown number in the second box.

$$5 \times 8 = \square$$

$$8 \times 7 = \square$$

← → ↶ ↷ ✖

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

Key: 40 and 56

Rubric: (1 point) The student enters the correct products.

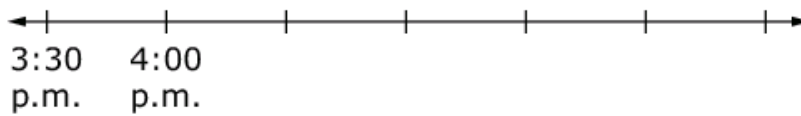
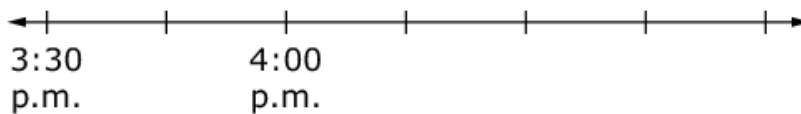
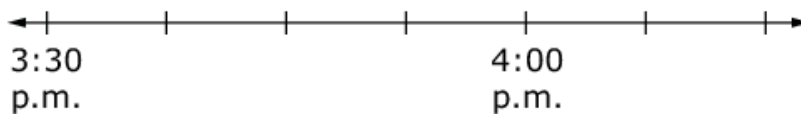
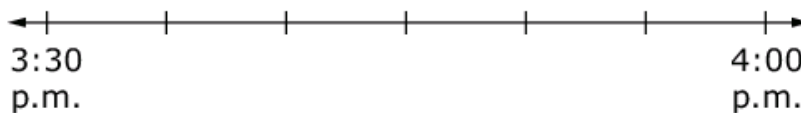
Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#16	3	MD	F	2	3.MD.A.1	4

Paul made a number line to show the times he started reading and finished reading.



Paul read for 45 minutes.

Which number line shows 4:00 p.m. in the correct place on Paul's number line?

- (A) 
- (B) 
- (C) 
- (D) 

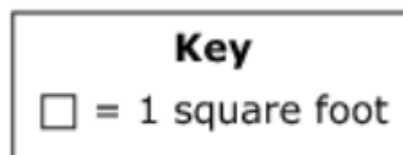
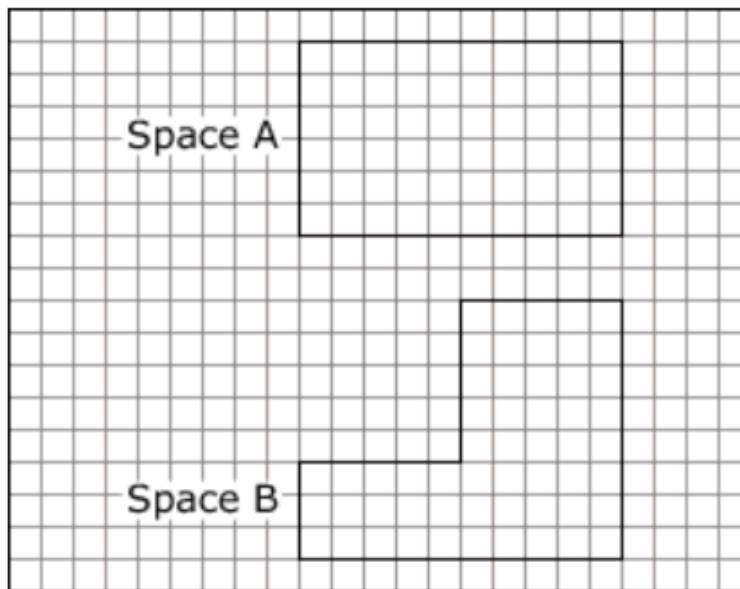
Key: B

Rubric: (1 point) The student identifies the correct number line.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#17	1	MD	I	2	3.MD.C	4, 6

City planners want to build a garden by the city library.

- There are 2 possible spaces for the garden.
- The planners draw models of the spaces on a grid.
- Each unit length on a model equals a length of 1 foot.



How much more area does space A have than space B?

- Ⓐ 5 square feet
- Ⓑ 25 square feet
- Ⓒ 30 square feet
- Ⓓ 60 square feet

Key: A

Rubric: (1 point) The student selects the correct number of square feet.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#18	2	OA	A	2	3.OA.D.8	1

There are 9 cherry trees.

- Kim picks 8 cherries from each tree.
- Kim eats 14 of the cherries she picked.

Enter the number of cherries Kim has left.

←
→
↶
↷
✖

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

Key: 58

Rubric: (1 point) The student enters the correct number of cherries.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#19	3	OA	E	2	3.OA.B.5	7

Libby said the answer to the problem $5 \times 2 \times 3$ is 25. Her work is shown.

- Step 1: $5 \times 2 = 10$
- Step 2: $5 \times 3 = 15$
- Step 3: $10 + 15 = 25$

Which is true?

- Ⓐ Libby's answer is correct because $10 + 15 = 25$.
- Ⓑ Libby's answer is correct because $2 + 3 = 5$ and $5 \times 5 = 25$.
- Ⓒ Libby's answer is not correct because she multiplied 5×3 and 5×2 .
- Ⓓ Libby's answer is not correct because she should have multiplied 10×15 .

Key: C

Rubric: (1 point) The student identifies the correct statement.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#20	4	OA	C	2	3.OA.D.8	1

Jamal’s mother plans a trip for the baseball team.

- There are 14 players on the team.
- There are 5 parents going on the trip.
- The players and parents will all travel together in cars.
- Each car can hold a total of 5 people.
- There must be at least 1 parent in each car.

What is the **fewest** number of cars they will need?

←
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↶
↷
✖

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

Key: 4

Rubric: (1 point) The student enters the fewest number of cars needed.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#21	3	NF	D	2	3.NF.A.3	2

Drag one number inside each box to make each statement true.

2
3
4
6
8

Delete
✖

$$\frac{\square}{\square} = 1$$

$$\frac{\square}{\square} < 1$$

$$\frac{\square}{\square} > 1$$

Key: For the first fraction equal to 1: 2/2, 3/3, 4/4, 6/6, or 8/8

For the second fraction less than 1: 2/3, 2/4, 2/6, 2/8, 3/4, 3/6, 3/8, 4/6, 4/8, or 6/8

For the third fraction greater than 1: 3/2, 4/2, 6/2, 8/2, 4/3, 6/3, 8/3, 6/4, 8/4, or 8/6

Rubric: (2 points) The student completes all three comparisons correctly.

(1 point) The student completes only two comparisons correctly.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#22	2	OA	C	2	3.OA.A, 2.OA.C	6

Jan divides 36 pens into groups.

- Each group has the same number of pens.
- Jan uses all of the pens.

For each number of pens in a group, click **Yes** or **No** to show if Jan can create groups that each have that number of pens.

	Yes	No
2 pens in each group	<input type="checkbox"/>	<input type="checkbox"/>
3 pens in each group	<input type="checkbox"/>	<input type="checkbox"/>
5 pens in each group	<input type="checkbox"/>	<input type="checkbox"/>
6 pens in each group	<input type="checkbox"/>	<input type="checkbox"/>
10 pens in each group	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown at right)

Rubric: (1 point) The student correctly identifies which groups can be formed using all the pens.

	Yes	No
2 pens in each group	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 pens in each group	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 pens in each group	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 pens in each group	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 pens in each group	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#23	4	MD	D	3	3.MD.B.3	5

Jenna made a picture graph in which each star represents some number of students. She forgot to complete the key.

Favorite Color

Color	Number of Votes
Red	★ ★
Blue	★ ★ ★ ★
Yellow	★ ★ ★ ★
Green	★ ★ ★ ★

Key

★ represents

The difference between the number of students who voted for blue and the number of students who voted for red is greater than 5 but less than 9.

Enter a possible number of students that each star could represent.

← → ↶ ↷ ✖

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

Key: 3 or 4

Rubric: (1 point) The student enters a possible number of students each star could represent.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#24	1	MD	H	2	3.MD.B.4	4

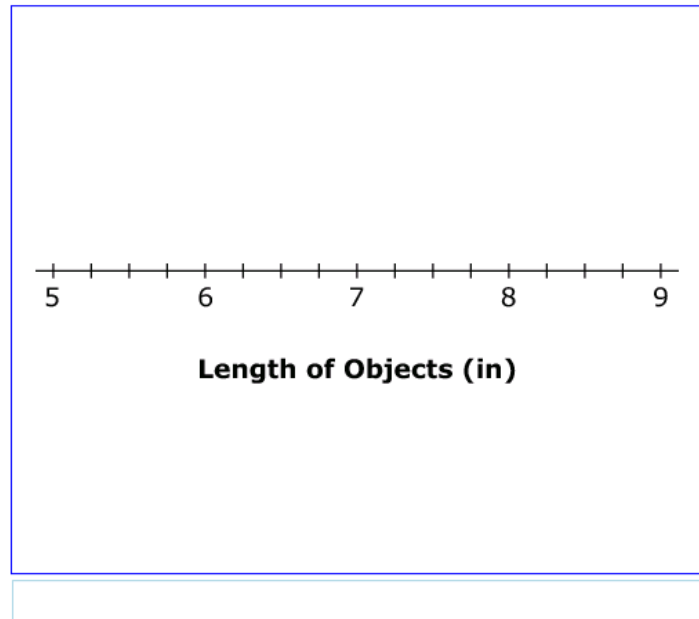
76545



Students pulled classroom objects from a bag and measured them in inches. They used this data to make a line plot.

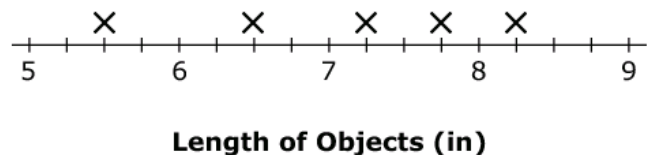
Objects	Length (in)
Pen	$5\frac{1}{2}$
Scissors	$7\frac{3}{4}$
Stapler	$7\frac{1}{4}$
Calculator	$6\frac{1}{2}$
Notepad	$8\frac{1}{4}$

Click above the tick marks to complete the line plot that displays the data.



Exemplar: (shown at right)

Rubric: (1 point) The student correctly completes the line plot.



Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#25	4	OA	E	2	3.OA.D.8	7

Kaden has 7 bags of animal toys. Each bag has these animal toys in it.

- 1 whale toy
- 5 dolphin toys
- 2 turtle toys

How many animal toys does Kaden have altogether?

Select **all** of the equations that show how to find the total number, t , of animal toys.

- $7 \times 8 = t$
- $7 + 1 + 5 + 2 = t$
- $7 \times (1 + 5 + 2) = t$
- $7 + (1 \times 5 \times 2) = t$

Key: first and third equations

Rubric: (1 point) The student identifies the correct equations.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#26	3	NF	B	3	3.NF.A.3	6

Two comparisons are shown.

$$\frac{\square}{\square} < \frac{2}{3}$$

$$\frac{\square}{\square} > \frac{2}{6}$$

Enter one fraction that makes both comparisons true.

←
→
↶
↷
✖

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

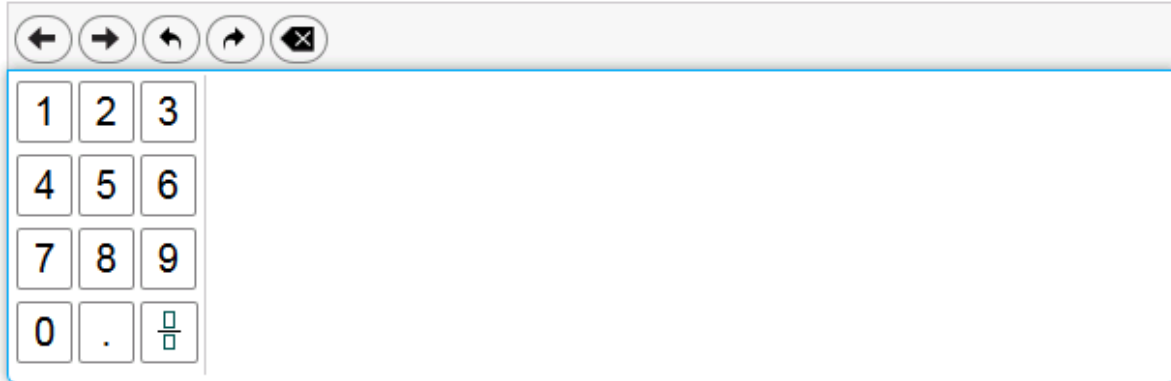
Key: Any fraction between $\frac{2}{6}$ and $\frac{2}{3}$; for example, $\frac{2}{4}$, $\frac{3}{5}$, $\frac{4}{10}$, etc. Decimal equivalents for the fractions are also acceptable.

Rubric: (1 point) The student enters an acceptable fraction or decimal.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#27	1	OA	D	2	3.OA.D.8	N/A

Jana has 107 wooden beads and 68 glass beads. How many more wooden beads than glass beads does Jana have?

Enter your answer in the response box.

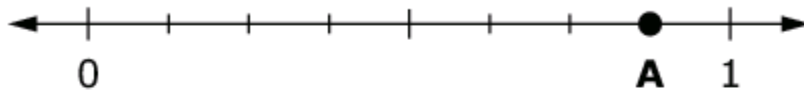


Key: 39

Rubric: (1 point) The student enters the correct number of beads.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#28	1	NF	F	2	3.NF.A.2	4

Enter the fraction located at Point A on the number line.



← → ↶ ↷ ✖

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

Key: $\frac{7}{8}$ or equivalent

Rubric: (1 point) The student enters a correct fraction represented by Point A.

Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#29	3	NF	A	2	3.NF.A.3	3

Nicki is comparing fractions.

She states, " $\frac{2}{3}$ is greater than $\frac{2}{4}$ because each $\frac{1}{3}$ piece is larger than each $\frac{1}{4}$ piece."

Part A

Click on the fraction bars to show $\frac{2}{3}$ and $\frac{2}{4}$.

Part B

Is Nicki correct? Click Yes or No.

Drag the correct symbol to compare the fractions.

>
Delete

<

=

Part A:

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

Part B:

Yes

No

$\frac{2}{3}$ $\frac{2}{4}$

Exemplar: (shown at right)

Rubric: (2 points) The student clicks on the correct number of $\frac{1}{3}$ and $\frac{1}{4}$ pieces in Part A and clicks on "Yes" and drags ">" into the box in Part B.

(1 point) The student correctly completes either Part A or Part B, but not both.

Part A:

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

Part B:

Yes

No

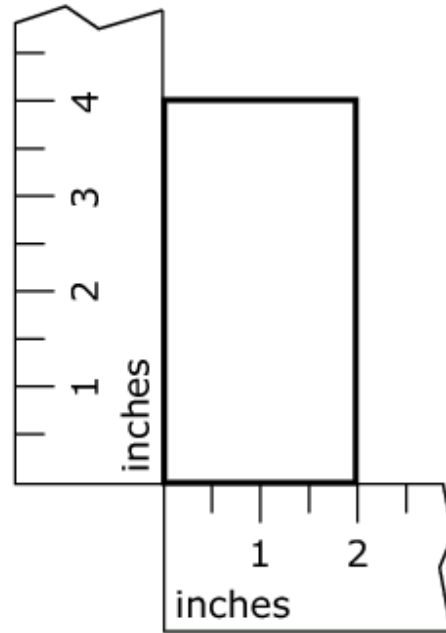
$\frac{2}{3}$

>

 $\frac{2}{4}$

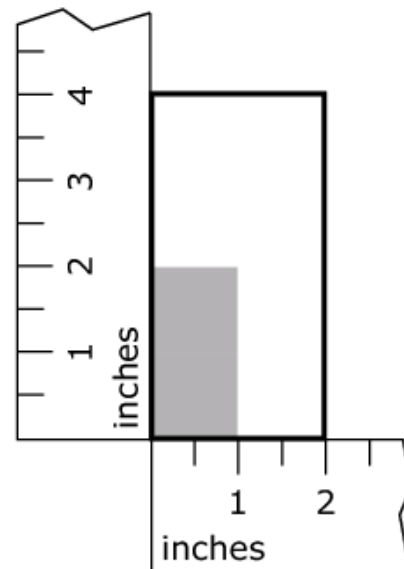
Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#30	1	G	K	2	3.G.A.2	4

This rectangle can be divided into equal parts. Click to shade $\frac{1}{4}$ of the rectangle.



Exemplar: (one possible solution shown at right)

Rubric: (1 point) The student correctly shades $\frac{1}{4}$ of the rectangle.



Item	Claim	Domain	Target	DOK	CCSS-MC	CCSS-MP
#31	1	OA	B	1	3.OA.B.5	7

Decide whether each expression is equal to 4×12 .
 Select Yes or No for each expression.

	Yes	No
$4 \times (10 + 2)$	<input type="checkbox"/>	<input type="checkbox"/>
$(4 \times 10) + 2$	<input type="checkbox"/>	<input type="checkbox"/>
$4 + (10 \times 2)$	<input type="checkbox"/>	<input type="checkbox"/>

Exemplar: (shown at right)

Rubric: (1 point) The student correctly identifies the equal expressions.

	Yes	No
$4 \times (10 + 2)$	<input checked="" type="checkbox"/>	<input type="checkbox"/>
$(4 \times 10) + 2$	<input type="checkbox"/>	<input checked="" type="checkbox"/>
$4 + (10 \times 2)$	<input type="checkbox"/>	<input checked="" type="checkbox"/>