Grade 6 - SBA Claim 1 Example Stems

This document takes publicly available information about the Smarter Balanced Assessment (SBA) in Mathematics, namely the Claim 1 Item Specifications, and combines and edits them down to hopefully be more useful for teachers and others. The SBA Consortium is not involved in producing this document, so editing choices do not reflect any guidance from the SBA Consortium.

The SBA uses evidence based design, viewing the assessment as eliciting evidence of student proficiency. That evidence is meant to support Claims, which in math are (to paraphrase):

1. A student understands **concepts** and can perform **procedures**.
2. A student can **solve problems**.
3. A student can **reason** (and critique the reasoning of others).
4. A student can analyze and **model real-world contexts** using mathematics.

These claims will be assessed in a roughly 40%-20%-20%-20% split. Given that previous assessments would heavily focus on procedures, while in this framework they constitute 20% as a focus (though of course are needed for items across all claims), this represents a significant shift in assessment.

This document only looks at Claim 1 about concepts and procedures. Items written for Claim can look much like the Example Stems below. At other Claims items can vary more widely, as one would expect for multistep problems and authentic reasoning or modeling contexts.

Claim 1 is divided into various Targets which correspond roughly to the Clusters within the Common Core State Standards in Mathematics. The items from different targets will be taken based on emphasis with [m] being major, [a] additional and [s] supporting.

Finally, in an era of anxiety about end-of-year assessment (which constitutes only part of the Smarter Balanced system), it should be said that these are offered primarily to promote teacher professional understanding. Practices such as using the Example Stems exclusively as learning targets are discouraged. SBA is designed as much as possible to assess authentic learning of mathematics as outlined in the Standards, so that authentic learning should guide instruction.

Ratios and Proportional Relationships

Target A [m]: Understand ratio concepts and use ratio reasoning to solve problems. (DOK 1, 2)

Example Stem: A game has green and blue pieces. The ratio of green game pieces to total pieces is 5:12.

Select **all** the statements that are correct about the game pieces.

A. The ratio of green pieces to blue pieces is 7:5.
B. The ratio of total pieces to blue pieces is 12:7.
C. There must be 7 more blue pieces than green pieces.
D. The ratio of total pieces to green pieces is 12:5.

Answer Choices: Answer choices will be four statements describing the ratio relationship. At least two statements must be correct.

Rubric: (1 point) Student selects all the correct statements (e.g., B and D).

Response Type: Multiple Choice, multiple correct response

Stimulus: The student is presented with a table that has an equivalent ratio and a single missing value.

Example Stem 1: The table shows a relationship between the number of tennis balls that fit into a given number of cans.

Cans	Balls
2	6
	15
7	21
9	27

Fill in the missing value in the table.

Rubric: (1 point) Student enters correct missing value (e.g., 5).

Example Stem: The table shows a relationship between the number of tennis balls that fit into a given number of cans.

Cans	Balls
1	
4	12
13	
15	45

Fill in the missing values to complete the table.

Rubric: (1 point) Student enters the two correct values into the table (e.g., 3 and 39). **Response Type:** Fill-in Table

Stimulus: The student is presented with a completed table that has an equivalent ratio.

Example Stem: The table shows a relationship between the number of tennis balls that fit into a given number of cans.

Cans	Balls
2	6
5	15
7	21
8	24

Use the Add Point tool to plot the coordinate pairs on the graph.

Interaction: Students will be given a graph with axes numbered and labeled appropriately. Students will need the Add Point and Delete tools.
Rubric: (1 point) Student correctly plots all coordinate pairs on the graph.
Response Type: Graphing

Stimulus: The student is presented with a blank table and a ratio *x:y.*

Example Stem: The ratio of *x* to *y* is $\frac{1}{4}$. All values of *x* and *y* are whole numbers less than 100.

x	*y*

Fill in the boxes with numbers to form a table with the given ratio.

Rubric: (1 point) Correct answer will have three sets of numbers equivalent to the given ratio. **Response Type:** Fill-in Table

Example Stem: Carl types 180 words in 2 minutes.

Enter the number of words Carl types in 5 minutes at this rate.

Example Stem: Enter the unknown value that makes this statement true:

30% of ☐ is 60.

Rubric: (1 point) Student enters the correct numeric value representing the total amount (e.g., 200).

Example Stem 1: Janet correctly answers 45 questions on her science test. There are 50 questions on the test.

Enter the percent of the questions Janet answers incorrectly.

Example Stem 2: Enter the unknown value that makes this statement true:

45 is ☐ % of 50.

Rubric: (1 point) Student enters the correct numeric value representing the percent (e.g., 90; 90) and 0.90 is not an acceptable answer. Percent symbol (%) is not required for a correct response.
Response Type: Equation/Numeric

Example Stem 1: In a school with 200 students, 45% are males.

Select **all** expressions that demonstrate a correct method to calculate the total number of male students**.**

A. $\frac{45}{100} \bullet 200$

B. $\frac{0.45}{100} \bullet 200$

C. $0.45 \bullet 200$

D. $\frac{45}{10} \bullet 200$

Answer Choices: At least two expressions must be correct.
Rubric: (1 point) Student selects all the correct mathematical expressions (e.g., A and C; A and C).
Response Type: Multiple Choice, multiple correct response

Stimulus: The student is presented with a measurement ratio with a missing equivalent ratio value.

Example Stem: Select the value that will complete this expression for converting 10 yards to inches.

$$\left(\frac{10 \text{ yards}}{1}\right)(\square)\left(\frac{12 \text{ inches}}{1 \text{ foot}}\right)$$

A. $\frac{1 \text{ yard}}{36 \text{ inches}}$ $B. \frac{3 \text{ feet}}{1 \text{ yard}}$ $C. \frac{360 \text{ inches}}{10 \text{ yards}}$ $D. \frac{120 \text{ feet}}{10 \text{ inches}}$

Example Stem 1: Mary runs 800 yards in 4 minutes at a constant rate.

Enter the number of **feet** Mary runs in 20 **seconds**.

The Number System

Target B [m]: Apply and extend previous understandings of multiplication and division to divide fractions by fractions. (DOK Levels 1, 2)

Example Stem: Which expression is equivalent to $\frac{1}{4} \div \frac{1}{8}$?

A. $\frac{1}{4} \bullet \frac{1}{8}$
B. $\frac{1}{4} \bullet \frac{8}{1}$
C. $\frac{4}{1} \bullet \frac{8}{1}$
D. $\frac{4}{1} \bullet \frac{1}{8}$

Answer Choices: Answer choices will be expressions showing multiplication of two fractions.

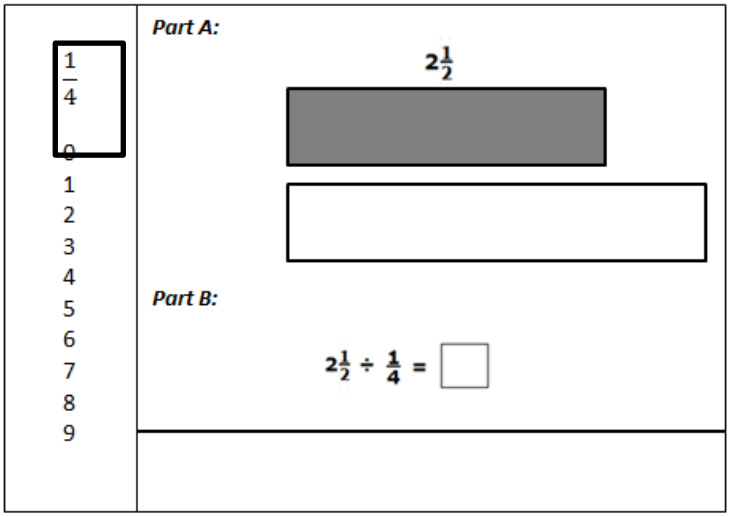
Rubric: (1 point) Student selects the correct answer (e.g., B).

Response Type: Multiple Choice, single correct response

Example Stem: The length of the shaded rectangle represents $2\frac{1}{2}$ units.

Part A:
Drag enough $\frac{1}{4}$-units into the empty rectangle to model $2\frac{1}{2}$ divided by $\frac{1}{4}$.

Part B:
Drag a number into the box to show the quotient of $2\frac{1}{2} \div \frac{1}{4}$.



Interaction: The student is given a reusable palette on the left side with the fractional unit that the box is being divided by and the digits 0–9. The fraction is to be dragged into the empty box. The bottom model should also extend longer, and the student should learn to stop dragging fractional units past the top model's length. Extra snap-to spaces need to be added to the extended portion of the box.

Rubric:
(2 points) The student completes the fraction model and drags the correct quotient to the box (e.g., 10).
(1 point) Partial credit may be allowed if the student only completes the fraction model or drags the correct quotient to the box.
Response Type: Drag and Drop

Stimulus: The student is presented with a quotient equation with a missing fraction or number. The missing fraction is always equivalent to 1.

Example Stem 1: What fraction makes the equation true?

$$\frac{2}{3} \div \frac{\square}{\square} = \frac{2}{3}$$

Drag a number into each box to create a fraction that will make the equation true.

Rubric: (1 point) The student drags the correct quotient to the boxes. Multiple answers possible in the form of $\frac{x}{x}$ (e.g., $\frac{4}{4}$).

Example Stem 2: What number makes the equation true?

$$\frac{2}{3} \div \frac{\square}{7} = \frac{14}{21}$$

Drag a number to the box to create a fraction that will make the equation true.

Rubric: (1 point) The student drags the correct number to the box so that the divisor equals 1 (e.g., 7).

Interaction: The student is given a palette to the left of the equation with the numbers 1–9 that can be used to make one-digit numbers. Delete tool should be provided.

Example Stem 3: The equation shown has an unknown number.

$$\frac{2}{3} \div \square = \frac{6}{8}$$

Enter a fraction that makes the equation true.

Rubric: (1 point) Student enters the correct fraction (e.g., 2; $\frac{1}{2}$; $\frac{8}{9}$).

Response Type: Equation/Numeric

Target C [a]: Compute fluently with multi-digit numbers and find common factors and multiples. (DOK Levels 1, 2)

Stimulus: The student is presented with a division expression.

Example Stem 1: Divide.

16,536 ÷ 24

Enter the exact quotient.

Example Stem 2: Divide.

35,702 ÷ 25

Enter the exact quotient.

Rubric: (1 point) Student enters the correct quotient (e.g., 689; 1428.08).

Response Type: Equation/Numeric

Example Stem: Subtract.

48.235 – 29.67

Enter the exact difference.

Example Stem: Multiply.

8.296 ● 0.8

Enter the exact product

Example Stem: Divide.

0.912 ÷ 0.24

Example Stem: Use the fact that 12 ● 218 = 2616.

Enter the exact product of 1.2 ● 2.18.

Rubric: (1 point) Student enters the correct product (e.g., 2.616).

Example Stem: Enter the greatest common factor of 24 and 36.

Example Stem: Enter the least common multiple of 6 and 8.

Example Stem: Consider the equation showing the distributive property.

24 + 30 = 6(4 + ☐)

Target D [m]: Apply and extend previous understandings of numbers to the system of rational numbers. (DOK Levels 1, 2)

Stimulus: The student is presented with a context involving a negative number or zero.

Example Stem: A Fahrenheit thermometer shows that the temperature is 15 degrees below zero.

Enter the integer that represents the temperature in degrees Fahrenheit.

Rubric: (1 point) The student enters the correct number (e.g., –15).

Stimulus: The student is presented with a quadrant on the coordinate plane and ordered pairs given in answer choices.

Example Stem: Select **all** ordered pairs that are located in the second quadrant of the coordinate grid.

A. (–3, 4)
B. (3, –8)
C. (–5, 4)
D. (–5, –8)

Answer Choices: Answer choices will be ordered pairs. Distractors will be the points not located in the given quadrant. At least two ordered pairs must be correct.

Rubric: (1 point) The student selects all ordered pairs located in the given quadrant (e.g., A and C).

Example Stem: Click the correct quadrant to identify where each ordered pair is located.

Ordered Pair	**1st Quadrant (I)**	**2nd Quadrant (II)**	**3rd Quadrant (III)**	**4th Quadrant (IV)**
(–8, 2)				
(–3, –5)				
(4, 2)				
(5, –12)				

Interaction: Hot spot tool is used to highlight cell indicating what quadrant the ordered pair lies in. Only one cell in a row should be highlighted at one time.

Stimulus: The student is presented with statements about two rational numbers and their position on a number line in relation to each other.

Example Stem: Consider the statements in the table shown. Select True or False for each statement.

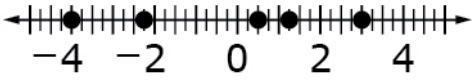
Statement	True	False
The numbers 7 and −12 are both located to the right of 0 on the number line.		
The number −12 is located to the right of 5 on the number line.		
The number −12 is located to the left of −8 on the number line.		

Example Stem: Which number line shows the correct positions of all the values shown?

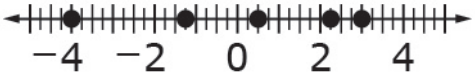
$$\frac{1}{2},\ -4,\ -2\frac{3}{4},\ 3,\ 1\frac{1}{4}$$

A.

B.

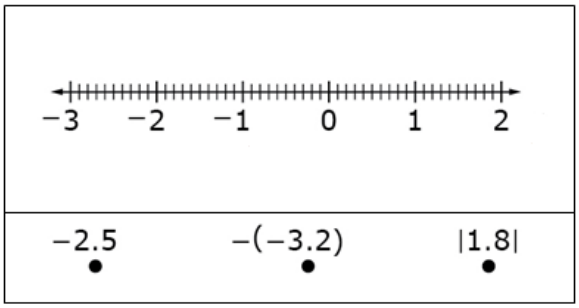


C.

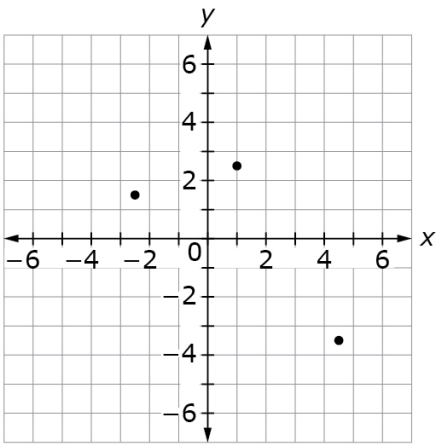


D.

Example Stem: Drag each number to its correct location on the number line.



Example Stem 2: Consider the coordinate plane.



Which list of ordered pairs corresponds to the points on the coordinate plane?

A. (-4 $\frac{1}{2}$,-3 $\frac{1}{2}$), (-1,2 $\frac{1}{4}$), (-2 $\frac{1}{2}$, -1 $\frac{1}{2}$)

B. (-2 $\frac{1}{2}$,1 $\frac{1}{2}$), (4 $\frac{1}{2}$,-3 $\frac{1}{2}$), (1, 2 $\frac{1}{4}$)

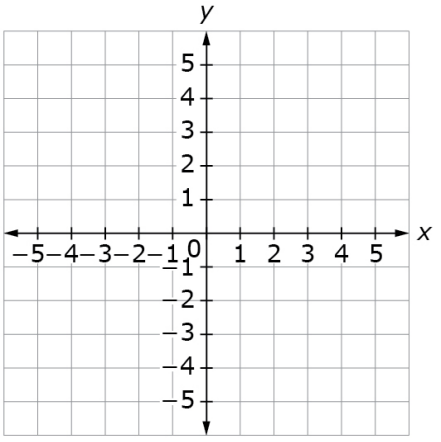
C. (-3 $\frac{1}{2}$,-4 $\frac{1}{2}$), (1, -2 $\frac{1}{4}$), (2 $\frac{1}{2}$,1 $\frac{1}{2}$)

D. (2 $\frac{1}{2}$,-1 $\frac{1}{2}$), (4 $\frac{1}{2}$,3 $\frac{1}{2}$), (1, -2 $\frac{1}{4}$)

Stimulus: The student is presented with three ordered pairs and a graphic of a coordinate plane.

Example Stem: Use the Add Point tool to plot these three ordered pairs on the coordinate grid:

(−2, 3)
(0, 3)
(−4, −2)



Rubric: (1 point) Student plots all three points correctly on the coordinate plane.

Stimulus: The student is presented with a real-world context involving rational numbers.

Example Stem: Sea level is defined as being at an elevation of 0 feet.

- The lowest elevation in Arizona is 72 feet.
- The lowest elevation in Louisiana is –68 feet.

Enter an inequality that compares these two elevations.

Rubric: (1 point) The student enters a correct inequality statement. Students are allowed credit for putting either "–68 < 72" or "72 > –68."

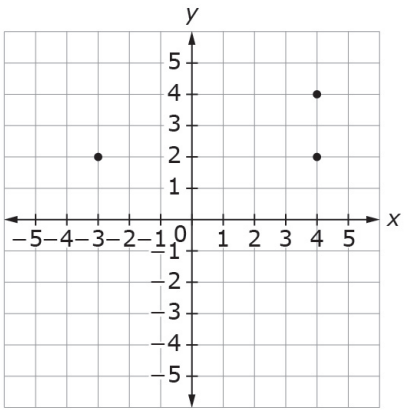
Stimulus: The student is presented with statements about the absolute value of numbers in relation to a number line.

Example Stem: Consider the statements in the table shown. Select True or False for each statement.

Statement	True	False
The distance from –3 to 0 is the same as the distance from 3 to 0 on the number line.		
The distance between –21 and 0 on a number line is |–21| units.		
On a number line, |4| and –4 are the same point.		

Example Stem 2: This grid represents the layout of Tom's neighborhood. Each unit on the grid represents 1 square mile.

- Tom's house is located at (4, 2)
- A store is located at (–3, 2)
- Tom's neighbors are located at (4, 4).



Enter the distance, in miles, from Tom's house to the store.

Statistics and Probability

Target I [a]: Develop an understanding of statistics variability. (DOK 2)

Stimulus: The student is presented with questions based on a statistical scenario.

Example Stem: Julie is writing a report about rainbows and needs to gather data from her classmates.

Which is a statistical question Julie could ask her classmates?

A. What are the colors of the rainbow?
B. When was the first rainbow seen?
C. Is there really a pot of gold at the end of a rainbow?
D. How many rainbows have you seen this month?

Rubric: (1 point) Student selects the statistical question (e.g., D)

Response Type: Multiple Choice, single correct response

Stimulus: The student is presented with three statistical and non-statistical questions.

Example Stem: A statistical question anticipates variability in the data related to it. Determine whether each question can be classified as a statistical question. Select Yes or No for each question.

Question	Yes	No
How many hours a week do people exercise?		
How many hours are there in a day?		
How many rainbows have students seen this month?		

Rubric: (1 point) Student identifies all three questions correctly (e.g., Y, N, Y). At least one question should be statistical.

Response Type: Matching Tables

Target J [a]: Summarize and describe distributions. (DOK Levels 1, 2)

Stimulus: Students create a dot plot given a data set.

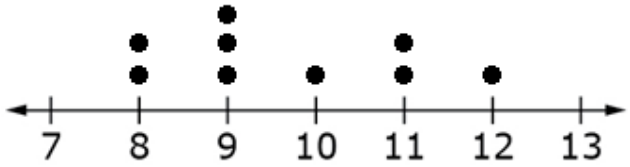
Example Stem: Consider this data set.

10	11	12
9	8	9
11	9	8

Click above the number line to create a dot plot for the data set.

Interaction: The student is given a labeled number line. Student uses the hot spot tool to click spaces above the number line to create a dot plot.

Rubric: (1 point) Student correctly creates a dot plot to represent the data (see below).



Response Type: Hot Spot

Stimulus: Students create a histogram given a data set.

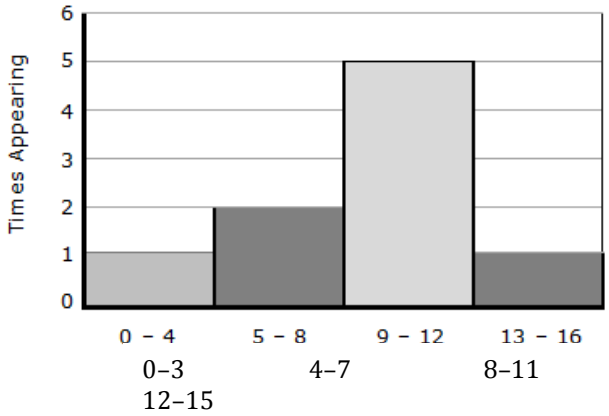
Example Stem: Consider this data set.

10	11	12
9	15	9
7	4	8

Click within the graph area to create a histogram for the data set.

Interaction: The student is given a 1st quadrant graph with both axes labeled. Hot-spot tool is used to click unit squares on the graph to shade in and create a histogram.

Rubric: (1 point) Student correctly creates a histogram to represent the data (see below).



Response Type: Hot Spot

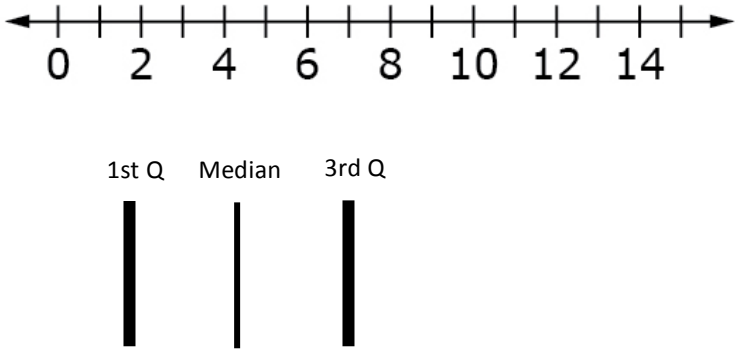
Stimulus: Students create a box plot given a data set.

Example Stem: Consider this data set.

10	11	12
9	15	9
7	4	8

The vertical line segments represent the 1st quartile (1st Q), median and the 3rd quartile (3rd Q) of the data set.

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



Interaction: The student is given a number line and a palette at the bottom of the screen. The palette contains three images of line segments labeled "1st Q," "Median," and "3rd Q." Students use the drag-and-drop tool to place the line segents in the appropriate place on the number line. Snap-to feature should be used at each tick mark on the number line.

Rubric: (1 point) Student places the three line segments in the correct locations on the number line.

Response Type: Drag and Drop

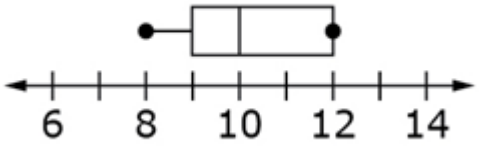
Stimulus: Students identify the box plot that represents a given data set.

Example Stem: Consider this data set.

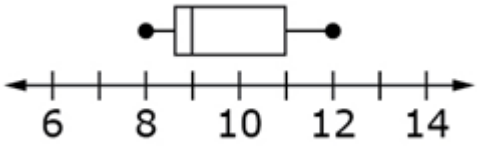
10	11	12
9	8	9
11	9	8

Which box plot displays the data shown in the chart?

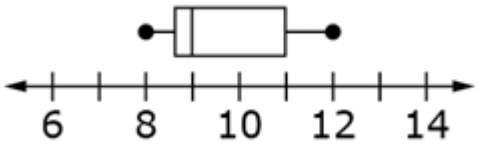
A.



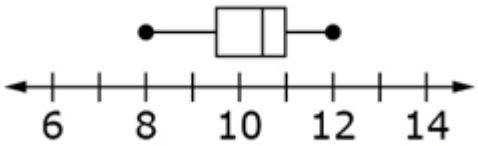
B.



C.



D.



Answer Choices: Answer choices will be box plots. Distractors will include incorrectly calculating the median, upper and lower quartile, and/or misrepresenting the data on a box plot.

Rubric: (1 point) The student selects the correct box plot (e.g., B).

Response Type: Multiple Choice, single correct response

Expressions and Equations

Target E [m]: Apply and extend previous understandings of arithmetic to algebraic expressions. (DOK 1)

Example Stem: Enter the value of $3^3 \bullet 7^2 - 8 \div 4$.

Rubric: (1 point) Student enters the correct value for the expression (e.g., 1321).

Response Type: Equation/Numeric

Example Stem 1: Enter a numerical expression that represents the sum of eight squared and thirty-two.

Example Stem 2: Enter an algebraic expression that represents eight times the sum of *y* squared and twenty-eight.

Rubric: (1 point) Student enters a correct numerical/algebraic expression for the given verbal expression (e.g., $8^2 + 32$; $8(y^2 + 28)$).

Example Stem: Select **all** the statements that correctly describe the expression $4^2 \bullet (8w - 3)$.

A. The expression contains four terms.
B. A term in the expression has a coefficient of 8.
C. The expression shows the quotient of $8w - 3$ and 4^2.
D. The expression shows a product of two factors.

Answer Choices: Answer choices should be statements that include the following vocabulary: sum, term, product, factor, quotient, and coefficient. Distractors will include confusing the meaning of sum, term, product, factor, quotient, and coefficient. At least two statements must be correct.
Rubric: (1 point) Student selects all the correct statements (e.g., B and D).

Example Stem: Select **all** the expressions that represent the product of two factors.

A. $2x \bullet 5y$
B. $4^2 \div 5y$
C. $4^2 \bullet (8w - 3)$
D. $2x + (8w - 3)$

Answer Choices: Answer choices will be numerical or algebraic expressions. Distractors will include confusing the meaning of sum, term, product, factor, quotient, and coefficient. At least two expressions must be correct.
Rubric: (1 point) Student selects all of the correct expressions (e.g., A and C).

Example Stem 1: The formula $C = \frac{5}{9}(F - 32)$ is used to convert degrees Fahrenheit (F) to degrees Celsius (C).

Enter the temperature, in degrees Celsius (C), equal to 113 degrees Fahrenheit (F).

Example Stem 3: Enter the value of $3^3 \bullet y^2 - 8 \div 4$ when $y = 7$.

Example Stem 1: Consider this expression: $3(2x + 5y)$.

Enter an expression that shows the **sum of exactly two terms** that is equivalent to $3(2x + 5y)$.

Example Stem 2: An equivalent expression to $6x + 15y$ can be written as the product of two factors. One of the factors is 3.

Enter the **second factor** that will result in $6x + 15y$ when the two factors are multiplied.

Example Stem 1: Consider this equation.

$$3(2x + 5y) = \square + \square$$

Drag a term into each box to create an expression equivalent to $3(2x + 5y)$.

Example Stem 3: Consider this equation.

$$6x + \square = 3(\square + 5)$$

Drag a term into each box to create a true equation.

Example Stem 1: Select **all** expressions that are equivalent to $4(3x + 6y)$.

A. $12x + 6y$
B. $12x + 24y$
C. $2(6x + 12y)$
D. $4(12x+24y)$

Example Stem 2: Select **all** expressions that are equivalent to $3 + w + w + w$.

A. $3(1 + w)$
B. $3 + 3w$
C. $3+w^3$
D. $3w^3$

Answer Choices: Answer choices will be algebraic expressions. Distractors will include confusing the meaning of sum, term, product, factor, quotient, and coefficient and/or the properties of operations. At least two expressions must be correct.

Target F [m]: Reason about and solve one-variable equations and inequalities. (DOK Levels 1, 2)

Example Stem: Select **all** equations that have $x = 3$ as a solution.

A. $x + 7 = 10$
B. $3 + x = 3$
C. $x \bullet 3 = 1$
D. $4 \bullet x = 12$

Answer Choices: Answer choices will be equations in the form $x + p = q$ or $px = q$, in which p and q must represent nonnegative rational numbers. Distractors will include confusing addition, subtraction, multiplication, or division, computation errors, and/or incorrect substitution. At least two equations must be correct.

Rubric: (1 point) Student selects all the correct equations (e.g., A and D).

Response Type: Multiple Choice, multiple correct response

Stimulus: The student is presented with a solution set and one inequality per answer choice.

Example Stem: Select **all** inequalities that have the set {–4.86, –2.5, 0, 2.74, 4.1} as possible solutions for x.

A. $x > -4.24$
B. $x < -5.5$
C. $x > -5.13$
D. $x < 4.5$

Example Stem: Consider the inequality $x > 7$.

Determine whether each value of x makes this inequality true. Select Yes or No for each value.

x	**Yes**	**No**
22		
-7		
13		
5		
-39		

Example Stem: Julia has some peaches**.** She gathers 6 more peaches. She now has 58 peaches.

Part A: In the first box, enter an **equation** to represent the total number of peaches, *p*, that Julia has after she gathers 6 more peaches.

Part B: In the second box, enter the **number** of peaches represented by *p* in this situation.

Example Stem: The sum of 32 and *n* is equal to 59.13.

Enter the equation described in the sentence.

Rubric: (1 point) Student enters the correct equation (e.g., $32 + n = 59.13$).

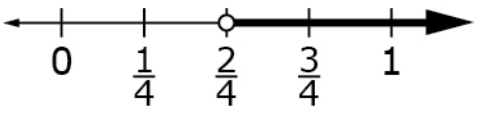
Example Stem: Enter the value of *y* that makes the given equation true.

$y + 3\frac{2}{9} = 5\frac{5}{6}$.

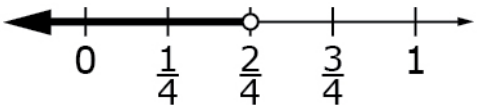
Rubric: (1 point) Student enters the correct value (e.g., $2\frac{11}{18}$).

Example Stem: Select the number line that represents all solutions of $x < -\frac{1}{2}$.

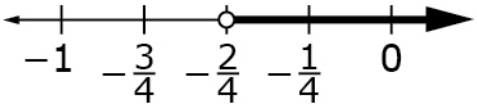
A.



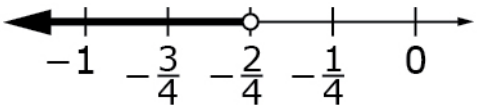
B.



C.



D.



Target G [m]: Represent and analyze quantitative relationships between dependent and independent variables. (DOK 2)

Stimulus: The student is presented with independent and dependent quantities in a real-world context.

Example Stem: Emily studies 40 minutes after lunch for a science exam. She studies *x* more minutes that evening.

Enter an **equation** that represents the total number of minutes, *y*, Emily studies for the science exam.

Rubric: (1 point) Student gives a correct equatio (e.g., 40 + *x* = *y*).

Stimulus: The student is presented with independent and dependent quantities in a real-world context.

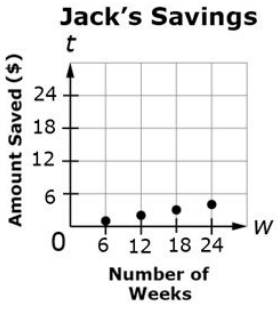
Example Stem: Jack saves $6.00 each week. He started saving beginning with Week 1.

- Let *w* represent the number of weeks that Jack saves.
- Let *t* represent the total amount saved, in dollars.

Which graph shows the amount of money Jack saves over 4 weeks?

A.

B.



C.

D.

Example Stem 1: Jack saves the same amount of money each week as shown in the table.

- Let *w* represent the number of weeks that Jack saves
- Let *t* represent the total amount saved, in dollars.

Number of Weeks ***w***	**Total Amount Saved** ***t***
1	$ 6
2	$12
3	$18
4	$24

Determine whether each statement is true. Select True or False for each statement.

Statement	**True**	**False**
The equation $t = 6 + w$ represents the relationship between the number of weeks and the total amount saved.		
The total amount saved is 6 times the number of weeks.		
The number of weeks that Jack saves depends on the total amount of money Jack saves.		

Example Stem 1: Jack saves the same amount of money each week as shown in the table.

- Let *w* represent the number of weeks that Jack saves
- Let *t* represent the total amount saved, in dollars.

Number of Weeks ***w***	**Total Amount Saved** ***t***
1	$ 6
2	$12
3	$18
4	$24

Enter the total amount of money, in dollars, that Jack saves after 6 weeks.

Rubric: (1 point) Student enters the correct value (e.g., 36).

Example Stem: The band members are selling chocolate bars for a fundraiser. The amount of money collected for each box of bars sold is the same.

- Let *n* represent the number of boxes sold.
- Let *d* represent the amount of money collected, in dollars.

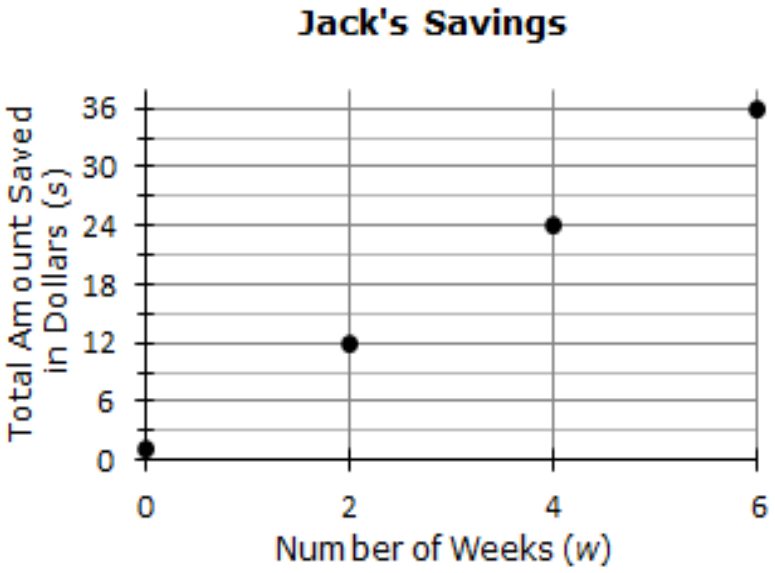
Number of Boxes Sold *n*	**Amount of Money Collected, in Dollars *d***
	30
2	
3	90
4	120
6	

Fill in the table for all missing values of *n* and *d*.

Rubric: (1 point) Student correctly enters all missing values in the table (e.g., 1, 60, and 180).

Example Stem 2: Jack saves the same amount of money each week as shown in the graph.

- Let *w* represent the number of weeks that Jack saves.
- Let *s* represent the total amount saved, in dollars.



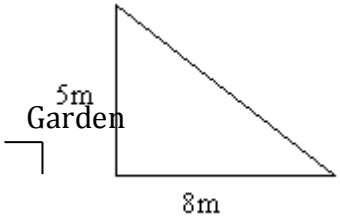
Enter an equation that represents the relationship between the number of weeks Jack saves and the total amount of money saved.
Rubric: (1 point) Student enters the correct equation (e.g., $s=6w$).

Geometry

Target H [s]: Solve real-world and mathematical problems involving area, surface area, and volume. (DOK Levels 1, 2)

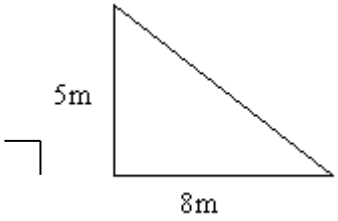
Stimulus: The student is presented with a mathematical or real-world problem involving triangles.

Example Stem 1: A triangular-shaped garden is shown.



Enter the area of the garden, in square meters.

Example Stem 2: Consider this figure.



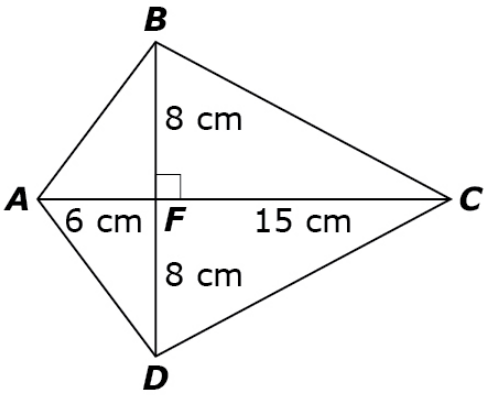
Enter the area of the right triangle in square meters.

Rubric: (1 point) Student enters the correct area of the figure (e.g., 20; 20). Correct answer should be a single numerical value and units should be assumed from the stem.

Response Type: Equation/Numeric

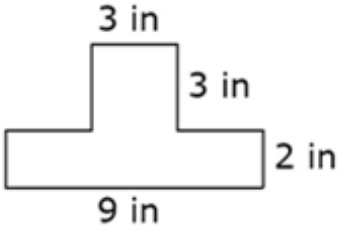
Stimulus: The student is presented with a mathematical or real-world problem involving composition or decomposition of a triangle, special quadrilateral, or other polygon.

Example Stem 1: Consider this figure.



Enter the total area of kite *ABCD* in square centimeters.

Example Stem 2: A company is using this design for their shirts. The design is made by joining a square and a rectangle. This figure shows the design.

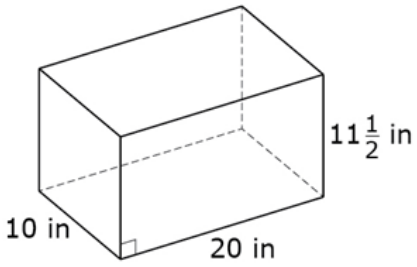


Enter the total area of the design in square inches.

Rubric: (1 point) Student enters the correct area of the figure (e.g., 168; 27). Correct answer should be a single numerical value and units should be assumed from the stem.

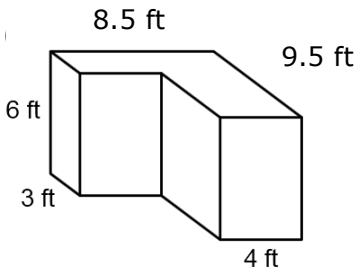
Response Type: Equation/Numeric

Example Stem: Consider this figure.



Enter the volume of the right rectangular prism in cubic inches.

Example Stem: This solid was created by joining two right rectangular prisms.

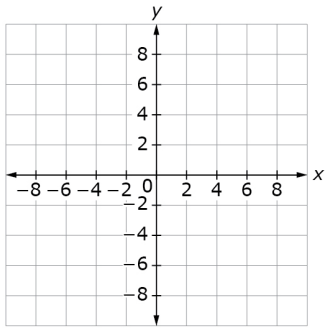


Enter the volume of the solid, in cubic feet.

Rubric: (1 point) Student enters the correct volume (e.g., 309). Correct answer should be a single numerical value and units should be assumed from the stem.

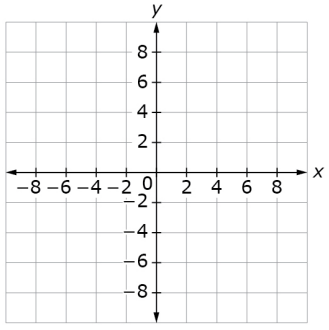
Example Stem: Consider these ordered pairs.

Point A: (3, 2)
Point B: (−3, 2)
Point C: (3, −2)



Use the Add Point and Connect Line tools to connect the three points to form triangle ABC.

Example Stem 2: Refer to the map as a coordinate grid. On the map, the library is located at (−5, 2), the bus station is located at (−5, 6), and the courthouse is located at (7, 2). Each square unit in the grid represents 1 square kilometer.



Enter the distance from the courthouse to the library in kilometers.

Rubric: (1 point) Student enters the correct length (e.g., 12; 12). Correct answer should be a single numerical value and units should be assumed from the stem.