Getting Ready for the 2016 Florida Standards Assessment (FSA)

Grade 6 Mathematics

Educators Resource — Spring 2016 FSA Mathematics
Equation Editor Item Tutorial [PDF]
FSA Scientific Calculator
Florida Computer-Based Testing Work Folder [PDF]
Spring 2016 Testing Times [PDF]
Grade 6 Mathematics Test Item Specifications [PDF] Grade 7 Mathematics Test Item Specifications [PDF] Grade 8 Mathematics Test Item Specifications [PDF]
Mathematics Test Design Summary [PDF]

Florida Department of Education
http://www.fldoe.org/academics/standards/florida-standards/

6th Grade Spiral Review Table of Contents

MAFS.6.RP.1.1

1

This table shows the number of books, by type, checked out from the school library on Monday.

Book Checkout

Book Type	Number of Books
Mystery	24
Nonfiction	18
Adventure	12
Humor	16

Use the drop-down menus to correctly complete this statement.

For every Choose... 2 3 4 6 mystery books checked out,

Choose... 2 3 4 6 nonfiction books were checked out.

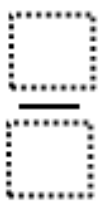
2

Mr. Keen, a band teacher, wanted to know if certain types of instruments are more appealing to one gender or the other. So, he conducted a survey of his students' preferences. The results are compiled in the chart below:

Instruments	Boys	Girls
Strings	15	23
Woodwind	19	30
Brass	27	13
Percussion	32	25

Part A

What is the ratio of the number of girls preferring woodwind instruments to the number of boys preferring woodwind instruments?

15 30 13 19 25 32 23 27	

Part B
What is the ratio of the number of boys preferring percussion instruments to the total number of boys who were surveyed?

15 30 93 19 25 32 23 66	☐ : ☐

Part C
What is the ratio of the number of girls preferring strings to the total number of students preferring strings?

15 30 13 19 38 32 23 91	☐ to ☐

3

To make the color purple, Jamal's art teacher instructed him to mix equal parts of red paint and blue paint. To make a different shade of purple, the ratio of red paint to blue paint is 2:1. What does the ratio 2:1 mean?

Type your answer in the space provided.

4	Abe and Malik both stayed after school on Wednesday to practice their instruments. Abe practiced for 30 minutes. Malik practiced 10 minutes longer than Abe. Select all the ratios that compare Abe's practice time to Malik's practice time. ☐ A. 10:30 ☐ B. 3:4 ☐ C. 40:10 ☐ D. 4:3 ☐ E. 30:40
5	At the local aquarium, there are 10 dolphins, 8 penguins, and 4 whales. What is the ratio of penguins to whales? Ⓐ 1:2 Ⓑ 2:5 Ⓒ 2:1 Ⓓ 2:5

	MAFS.6.RP.1.1 – FSA PRACTICE
1	Ms. Williams asked her class if they prefer doing their homework before school or afterschool. If the ratio of students who prefer doing homework before school to students who prefer doing homework afterschool is 7:15, what does the ratio $\frac{7}{22}$ represent? Explain. Write your answer in the space provided.
2	Brandon has a garden in his backyard. He picked 66 tomatoes from 6 tomato plants. What is the ratio of tomato plants to tomatoes picked? Ⓐ 1:6 Ⓑ 11:1 Ⓒ 1:11 Ⓓ 6:1

3

At a garage sale, the following items were sold.

Item	Number Sold
t-shirts	25
shorts	15
dresses	4
hats	2
shoes	5
sunglasses	10

Which of the items sold represent a ratio of 5:2? Select all that apply.

- ☐ shoes to hats
- ☐ all items to t-shirts
- ☐ sunglasses to dresses
- ☐ shorts to shoes
- ☐ t-shirts to sunglasses

4

Joann has 3 green marbles, 5 blue marbles, and 9 yellow marbles. What is the ratio of green marbles to blue marbles?

Ⓐ $\frac{3}{17}$

Ⓑ $\frac{17}{3}$

Ⓒ $\frac{5}{3}$

Ⓓ $\frac{3}{5}$

5	The ratio of violin players to flute players in the school's orchestra is 5:3. What does this mean? Ⓐ For every 5 violin players, there are 3 flute players. Ⓑ There are 5 more violin players than flute players. Ⓒ There are 2 more violin players than flute players. Ⓓ For every 5 flute players, there are 3 violin players.

	MAFS.6.RP.1.2
1	A class of 25 students shares a class set of 100 markers. On a day with 5 students absent, which statement is true? Ⓐ For every 5 students, there is 1 marker. Ⓑ For every 4 students, there is 1 marker. Ⓒ For each student, there are 4 markers. Ⓓ For each student, there are 5 markers.
2	Rodrigo filled up his tank with 10 gallons of gas, which cost him $45.00. How much did he pay per gallon of gas? Write your answer in the space provided.
3	Lauren ran for 45 minutes and traveled 3 miles. What is her rate per mile? Write your answer in the space provided.
4	Trina and her mom are planting 45 plants in their garden. If their garden is 9 square feet, how many plants can they put in each square foot? Write your answer in the space provided?

	MAFS.6.RP.1.2 – FSA PRACTICE
1	Curtis decided to go on a road trip to Canada. On the first day of his trip, he drove for 11 hours and traveled 693 miles. At what unit rate did he travel on the first day, in miles per hour?
2	Paulina walked on the treadmill for 13 minutes. After her walk, the machine said she had a total of 715 strides. What was her unit rate in strides per minute? (A) 56 strides per minute (B) 53 strides per minute (C) 64 strides per minute (D) 55 strides per minute
3	A video game displays 174 frames in 6 seconds on Sam's computer. What is the unit rate in frames per second? (A) 30 frames per second (B) 29 frames per second (C) 27 frames per second (D) 28 frames per second

4

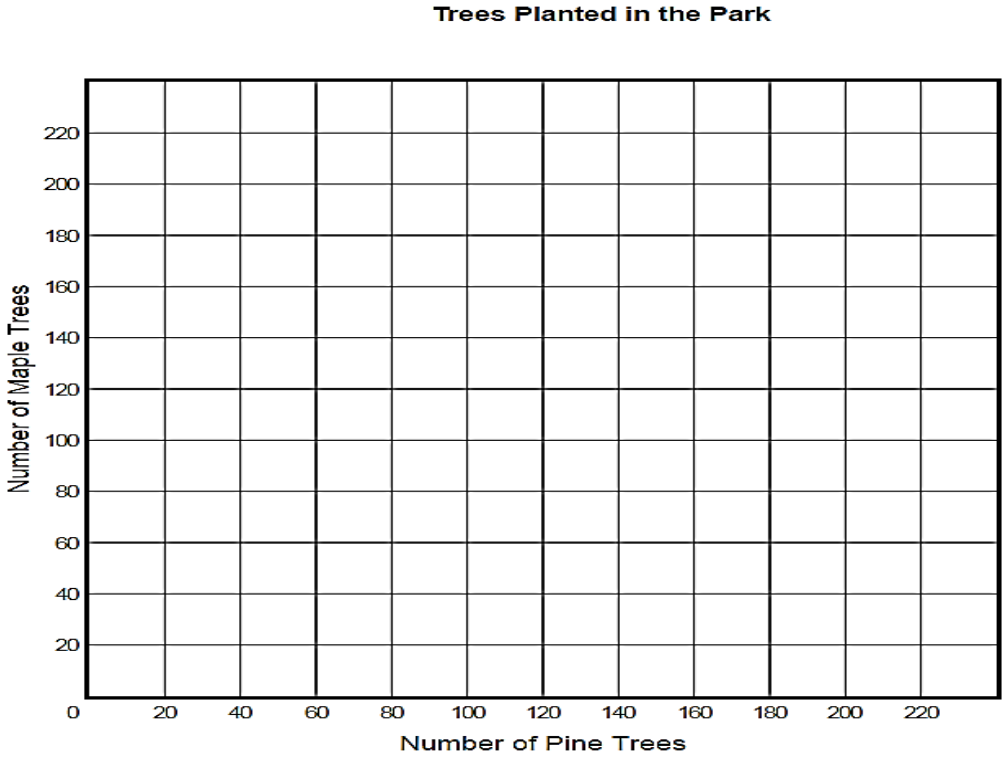
Penelope compared the prices of four different seafood restaurants that offer coconut shrimp on their menu. She wanted to see which restaurant offered the best deal. The prices are shown in the table below.

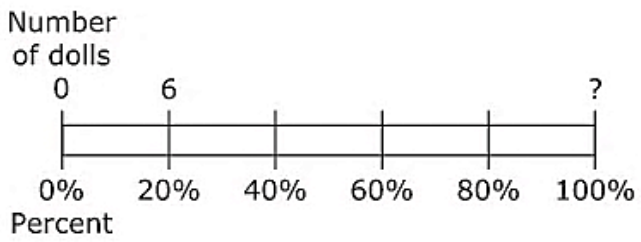
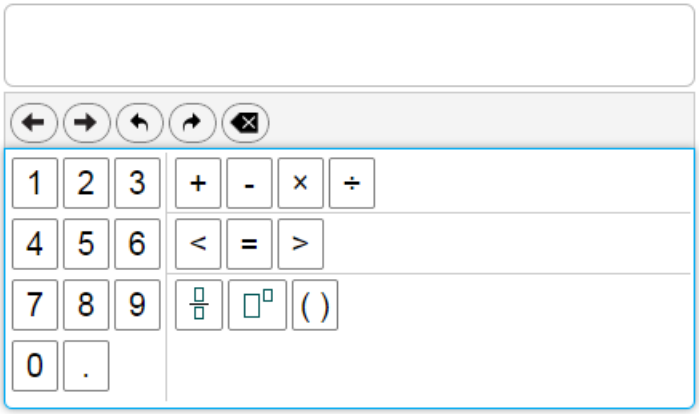
Restaurant	Price
A	$13.20 for 8 shrimp
B	$18.00 for 12 shrimp
C	$10.32 for 6 shrimp
D	$13.05 for 9 shrimp

Write the correct answer the each box.

Restaurant [ ] offered the best deal at $[ ] per shrimp.

	MAFS.6.RP.1.3a, b, c, d, e
1	Use the information provided to answer Part A and Part B. The ratio of the sales tax to the amount of a purchase is a fixed number in Town Q. The table shows the sales tax for a purchase of $1,200. **Town Q Tax** | Purchase	Sales Tax
$1,200	$72
$2,500	?
?	$108 | **Part A** What is the sales tax for a purchase of $2,500? Ⓐ $18.06 Ⓑ $34.72 Ⓒ $144.00 Ⓓ $150.00 **Part B** What is the cost of an item with a sales tax of $108? Ⓐ $432 Ⓑ $648 Ⓒ $1,092 Ⓓ $1,800

2	Chad drove 168 miles in 3 hours. **Part A** How many miles per hour did Chad drive? Enter your answer in the box. [ ] miles per hour **Part B** Chad will drive 672 more miles. He continues to drive at the same rate. How many hours will it take Chad to drive the 672 miles? Enter your answer in the box. [ ] hours
3	A total of 300 trees will be planted in a park. There will be 2 pine trees planted for every 3 maple trees planted. Plot the points that represent the number of pine and maple trees planted. Selected the places on the coordinate plane to plot the points. 

4	Hank bought 5 meters of ribbon for $4. Use the drop-down menus to complete the sentence. The ribbon costs [Choose... / $0.008 / $0.08 / $0.80] per [Choose... / millimeter / centimeter / kilometer].
5	Anita brings 6 dolls to her grandma's house. These dolls represent 20% of Anita's doll collection, as shown in the diagram.  What is the total number of dolls in Anita's doll collection? Enter your answer in the space provided. 

<table>
<tr><td></td><td>MAFS.6.RP.1.3a, b, c, d, e - FSA PRACTICE</td></tr>
<tr><td>1</td><td>Shelly biked 21 miles in 4 hours.

Part A
What is Shelly's average speed in miles per hour?
Enter your answer in the box.
☐

Part B
At the same rate, how many hours will it take Shelly to bike 42 miles?
Enter your answer in the box.
☐</td></tr>
<tr><td>2</td><td>Mark true or false to indicate whether the ratios are equivalent or not.
<table>
<tr><th>Ratios</th><th>True</th><th>False</th></tr>
<tr><td>$\frac{3}{6}$ and $\frac{9}{36}$</td><td>☐</td><td>☐</td></tr>
<tr><td>$\frac{6}{9}$ and $\frac{12}{18}$</td><td>☐</td><td>☐</td></tr>
<tr><td>$\frac{10}{5}$ and $\frac{30}{15}$</td><td>☐</td><td>☐</td></tr>
<tr><td>$\frac{16}{3}$ and $\frac{32}{9}$</td><td>☐</td><td>☐</td></tr>
</table></td></tr>
</table>

3

Chris and Jenny are comparing two similar punch recipes. Each recipe calls for cranberry juice and giner ale but in different amounts. The tables below show the amounts of cranberry juice and ginger ale for four different quantities of punch. Mark yes or no in the below table to answer the questions.

Chris' Punch	
Cranberry Juice (in cups)	Ginger Ale (in cups)
1	4
2	8
3	12
5	20

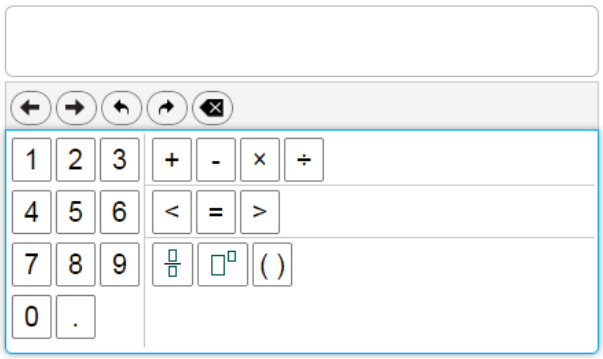
Jenny's Punch	
Cranberry Juice (in cups)	Ginger Ale (in cups)
2	3
4	6
6	9
10	15

Questions	Yes	No
Is the proportion of the punch that is cranberry juice the same in each of Chris's recipes given in his table?	☐	☐
Is the proportion of the punch that is cranberry juice the same in each of Jenny's recipes given in her table?	☐	☐
Is the proportion of the punch that is cranberry juice the same in Chris's recipes as it is in Jenny's recipes?	☐	☐

4

Ms. Mitchell buys a new pair of boots that originally cost $65.00, but are now on sale for 15% off. What is the sale price of the boots?

Write your answer in space provided.



5

Roger ran eight laps around a $\frac{1}{4}$ mile track during PE on Monday. Answer each question in the space provided.

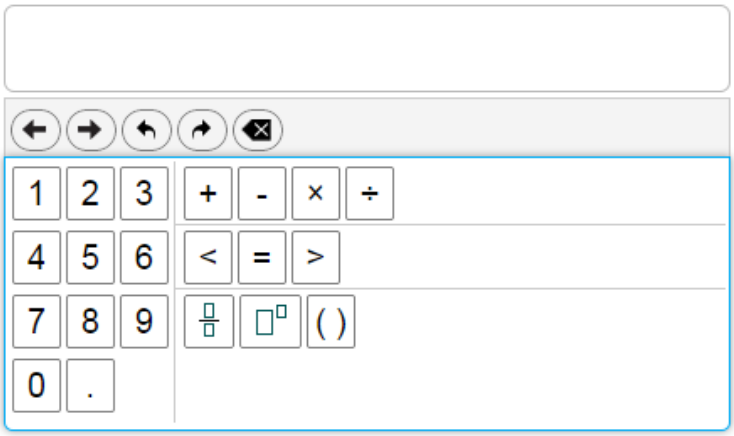
1 lap = $\frac{1}{4}$ mile
1 mile = 5280 feet
1 mile = 1760 yards
3 feet = 1 yard

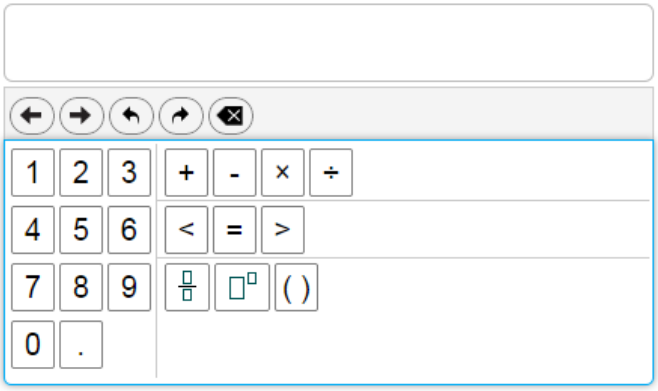
Part A

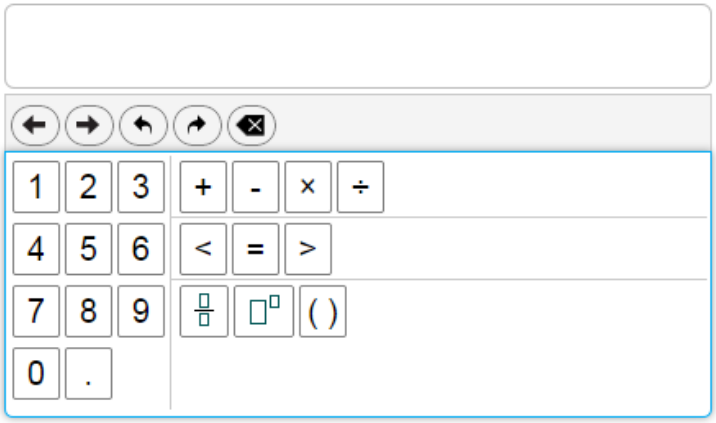
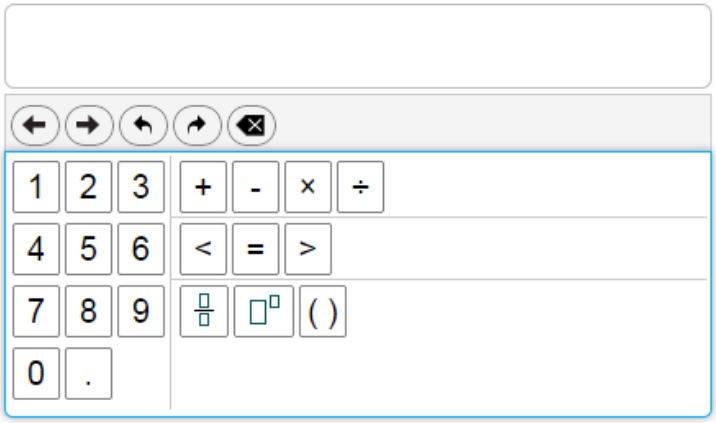
How many feet did Roger run in completing eight laps?

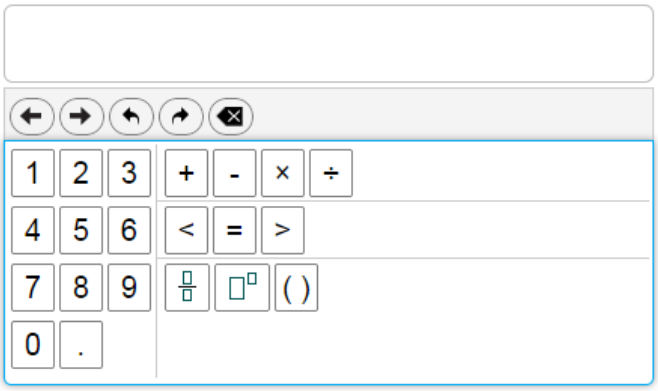
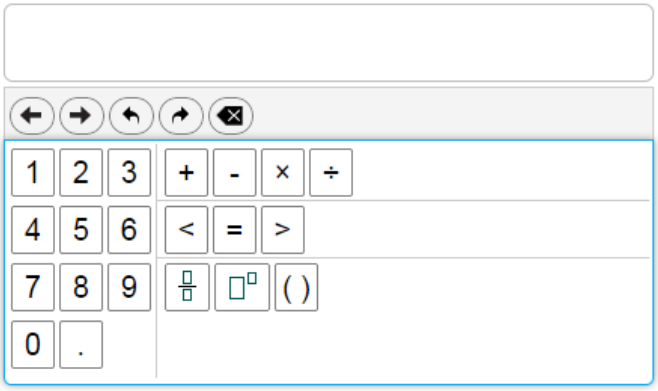
Part B

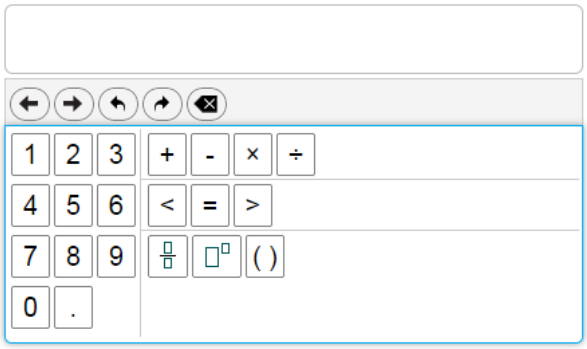
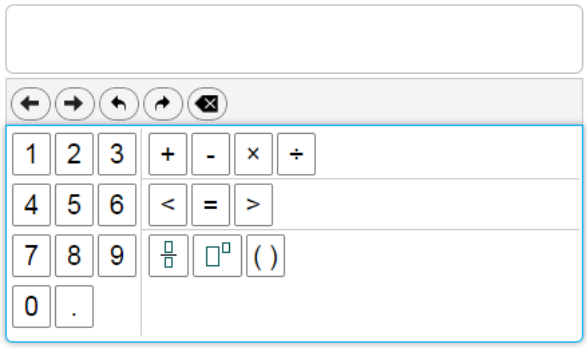
If Roger wants to run 10 miles by the end of the week, how many more laps will he need to run this week?

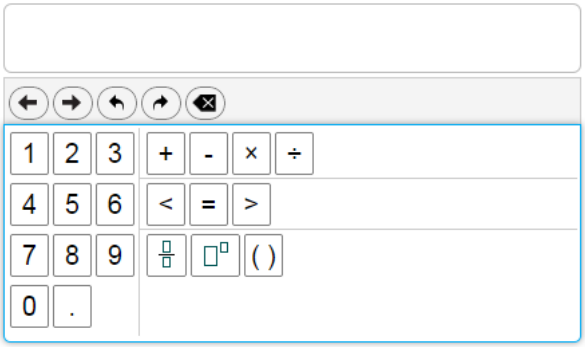
	MAFS.6.NS.1.1
1	The area of a rectangular patio is $5\frac{5}{8}$ square yards, and its length is $1\frac{1}{2}$ yards. What is the patio's width, in yards? Ⓐ $3\frac{3}{4}$ Ⓑ $4\frac{1}{8}$ Ⓒ $7\frac{1}{8}$ Ⓓ $8\frac{7}{16}$
2	Joanne buys a rectangular rug with an area of $\frac{35}{4}$ square meters. The length of the rug is $\frac{7}{2}$ meters. What is the width, in meters, of the rug? Enter your answer in the space provided. Enter **only** your fraction. 

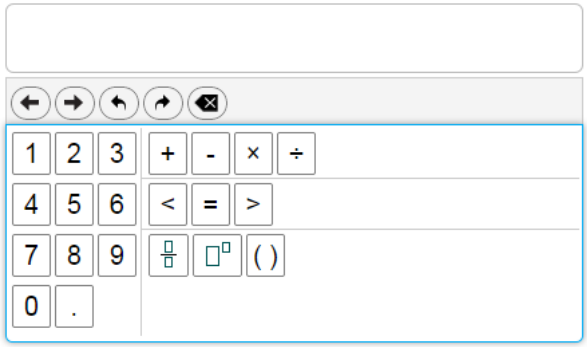
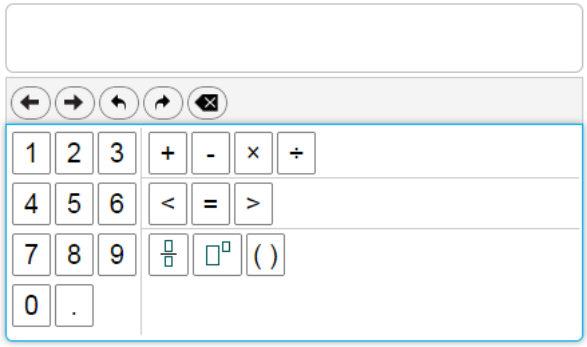
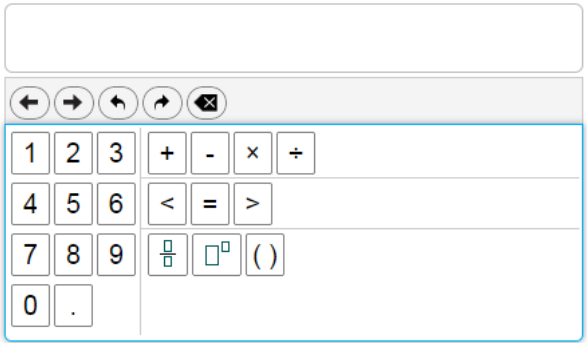
3	Carol makes $9\frac{1}{3}$ cups of snack mix. She puts all the snack mix into plastic bags. She puts $\frac{2}{3}$ cup of the snack mix in each bag. How many plastic bags does Carol need? Enter your answer in the box. [ ] plastic bags
4	An expression is shown. $\frac{3}{5} \div \frac{5}{8}$ What is the value of the expression? 

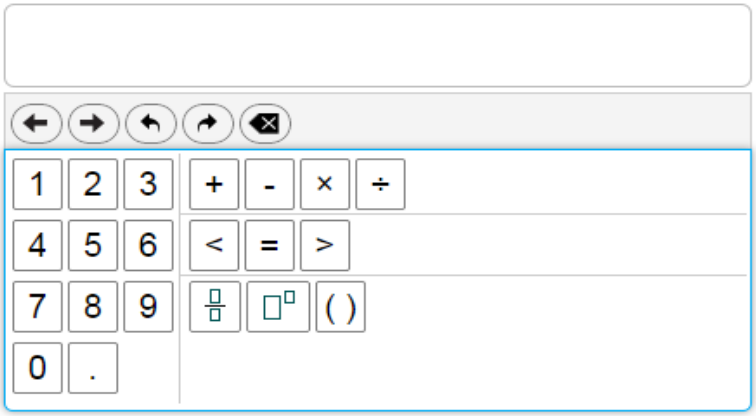
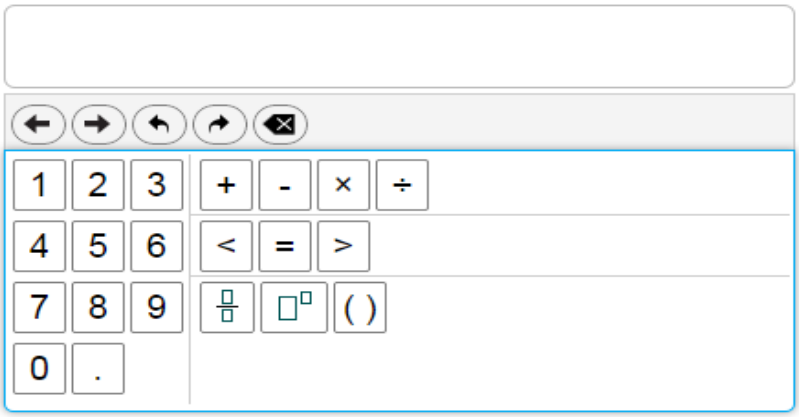
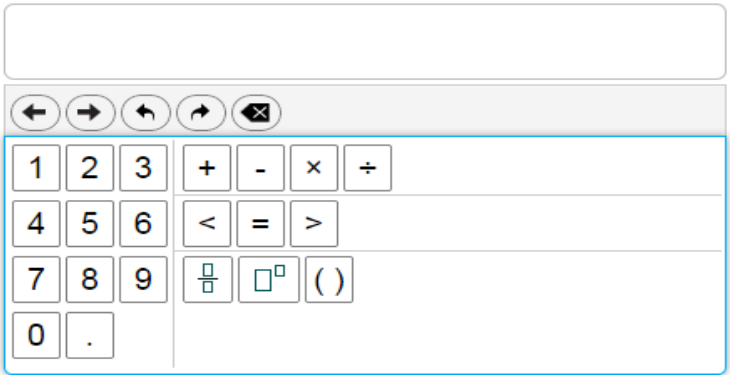
	MAFS.6.NS.1.1 - FSA PRACTICE
1	Jasmine wants to build a $2\frac{5}{6}$ meter long garden path paved with square stones that measure $\frac{1}{4}$ meter on each side. There will be no spaces between the stones. How many stones will be needed to complete the garden path? Write your answer in the space provided. 
2	A container at a juicing plant holds $4\frac{2}{3}$ tons of oranges. The plant can juice $1\frac{2}{3}$ tons of oranges per day. At this rate, how long will it take to empty the container? Write your answer in the space provided. 

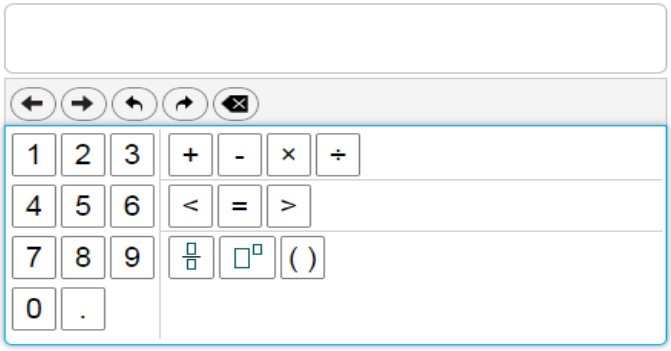
3	How many quarter pound burgers can George make out of $3\frac{1}{2}$ pounds of ground beef? Write your answer in the space provided. 
4	An expression is shown. $8\frac{1}{10} \div 4\frac{1}{5}$ What is the value of the expression? 

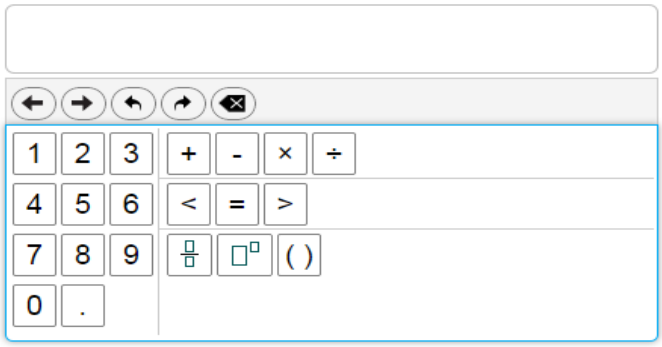
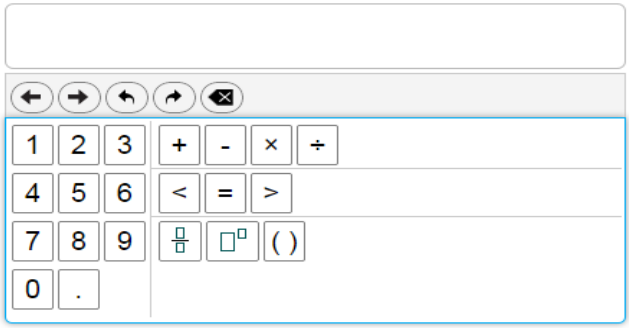
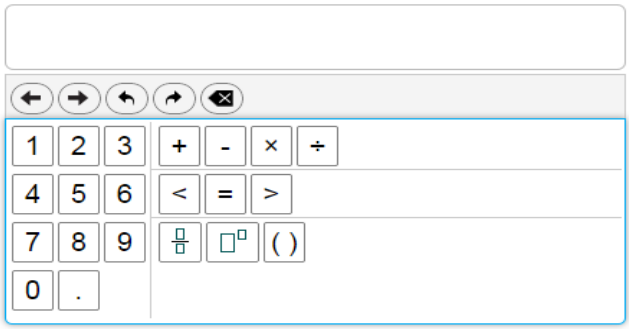
	MAFS.6.NS.2.2
1	An expression is shown. 34992 ÷ 81 What is the value of the expression? 
2	An expression is shown. 1748 ÷ 76 What is the value of the expression? 

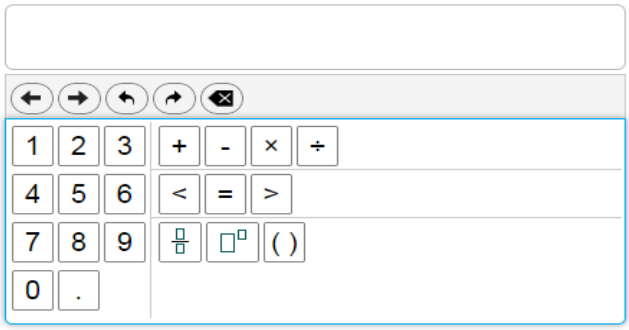
3	An expression is shown. 55290 ÷ 95 What is the value of the expression? 

	MAFS.6.NS.2.2 - FSA PRACTICE
1	An expression is shown. 3157 ÷ 77 What is the value of the expression? 
2	An expression is shown. 4590 ÷ 27 What is the value of the expression? 
3	An expression is shown. 11176 ÷ 22 What is the value of the expression? 

	MAFS.6.NS.2.3
1	An expression is shown. $33.8 \div 32.5$ What is the value of the expression? 
2	An expression is shown. 18.3×4.39 What is the value of the expression? 
3	What is the sum of 74.835 and 2.67? 

4	An expression is shown. 6.459 – 0.62 What is the value of the expression? 

	MAFS.6.NS.2.3 – FSA PRACTICE
1	An expression is shown. 11.263 –11.21 What is the value of the expression? 
2	An expression is shown. 57.9 × 0.086 What is the value of the expression? 
3	An expression is shown. 1.69 + 0.097 What is the value of the expression? 

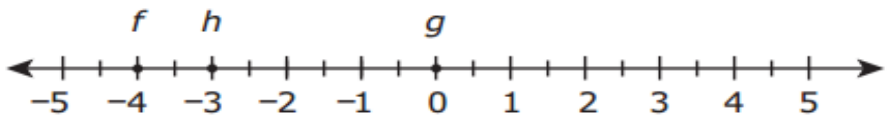
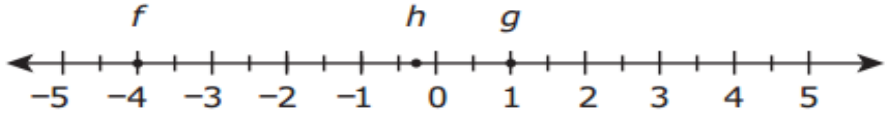
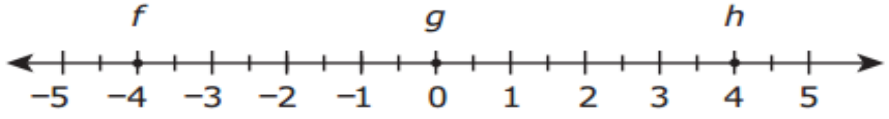
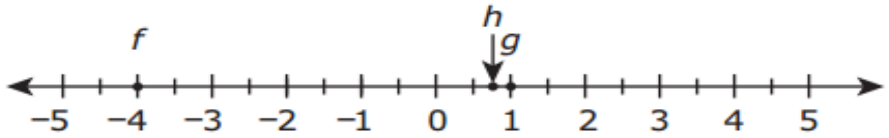
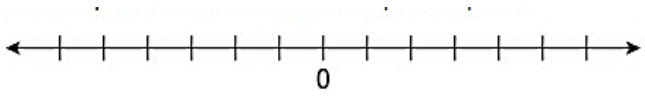
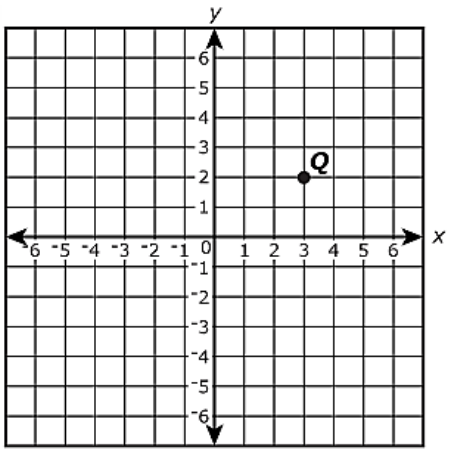
4	An expression is shown. 129.22 ÷ 24.85 What is the value of the expression? 

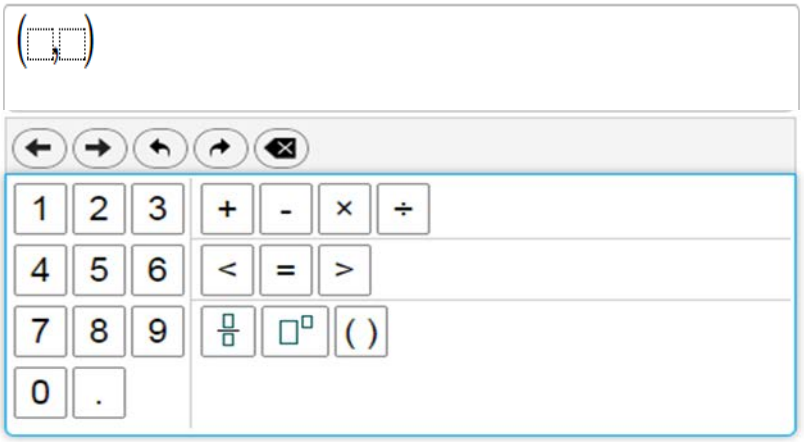
	MAFS.6.NS.2.4
1	What is the greatest common factor of 16 and 48? Enter your answer in the box.
2	What is the least common multiple of 7 and 8? Enter your answer in the box.
3	What is the greatest common factor of 54 and 45? Enter your answer in the box.
4	What is the least common multiple of 6 and 10? Enter your answer in the box.
5	Which expression is equivalent to $63 + 27$? A. $(9 \times 7)(9 \times 3)$ B. $9(7 + 3)$ C. $(9 + 7)(9 + 3)$ D. $9 + (7 \times 3)$

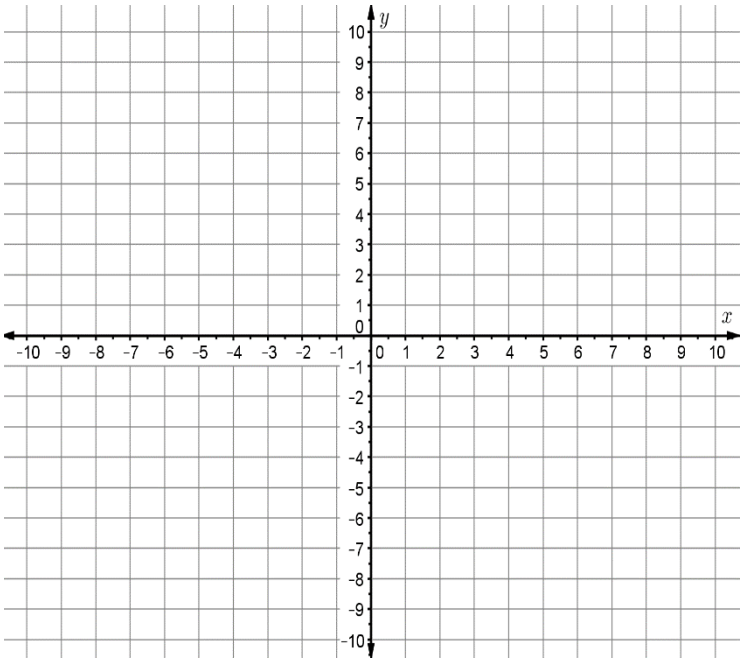
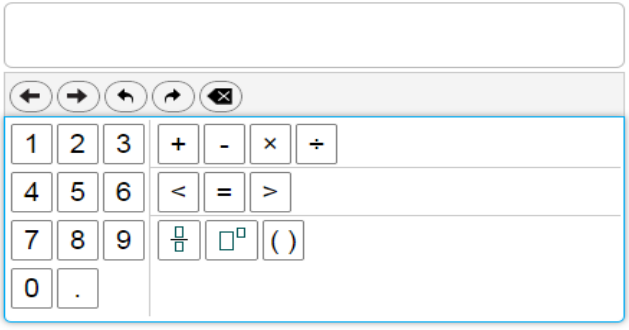
	MAFS.6.NS.2.4 – FSA PRACTICE
1	What is the greatest common factor of 24 and 36? Enter your answer in the box.
2	What is the least common multiple of 8 and 12? Enter your answer in the box.
3	What is the greatest common factor of 36 and 40? Enter your answer in the box.
4	What is the least common multiple of 5 and 7? Enter your answer in the box.
5	Which expression is equivalent to $84 + 48$? A. $(12 \times 7)(12 \times 4)$ B. $(12 + 7)(12 + 4)$ C. $12 + (7 \times 4)$ D. $12(7 + 4)$

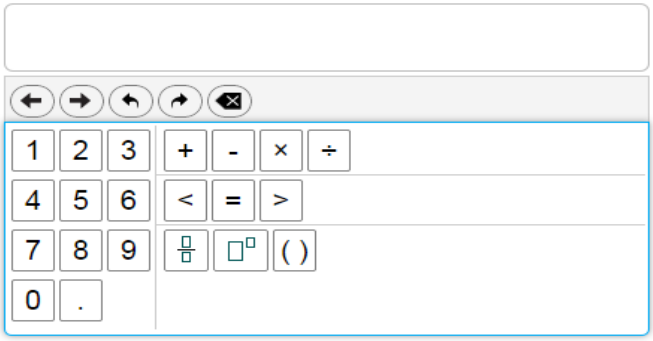
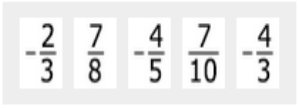
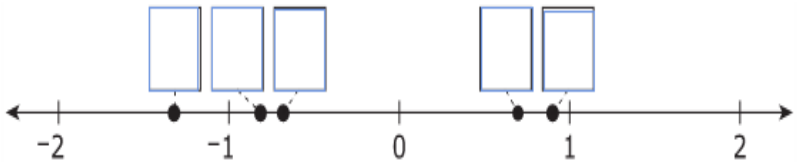
<table>
<tr><td></td><td>MAFS.6.NS.3.5</td></tr>
<tr><td>1</td><td>Describe the following scenarios using positive and negative integers.
<table>
<tr><th>Scenario</th><th>Positive/Negative Integer</th></tr>
<tr><td>a withdrawal of fifty dollars</td><td></td></tr>
<tr><td>a temperature three degrees below zero</td><td></td></tr>
<tr><td>an elevation seventy feet above sea level</td><td></td></tr>
</table></td></tr>
<tr><td>2</td><td>What number best represents the temperature in Anchorage, Alaska of below 12 degrees?
Enter your answer in the box.</td></tr>
<tr><td>3</td><td>Karen has a credit of $31.38 at ABC Store. Which number below best represents a Karen’s credit?
A. -21.38
B. 31.38
C. -31.38
D. 21.38</td></tr>
<tr><td>4</td><td>Which of the following best represents an elevation of 0 feet?
A. a sea trench
B. a mountain top
C. a beach
D. a roof top</td></tr>
</table>

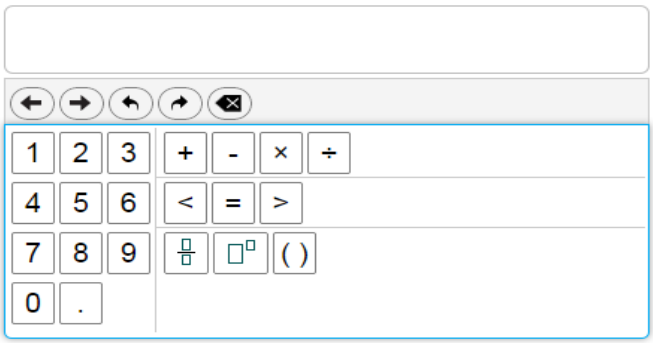
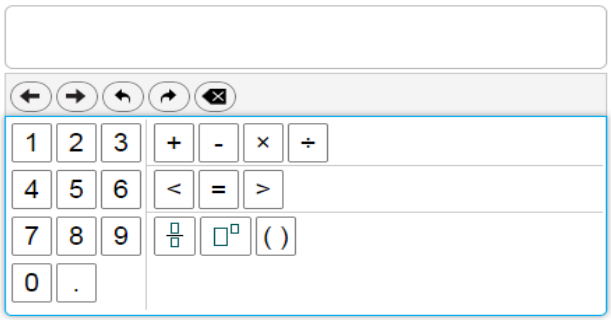
	MAFS.6.NS.3.5 – FSA PRACTICE
1	Which number below best represents a positive charge of 1,350? A. -1,250 B. 1,350 C. -1,350 D. 1,250
The change in position of the ball during each play of a football game is measured in yards. Use the information below to answer questions 2 – 4.	
2	What integer best represents a gain of 5 yards? Enter your answer in the box.
3	What integer best represents a loss of 15 yards? Enter your answer in the box.
4	What would the number 0 represent in this context? Write your answer in the box.

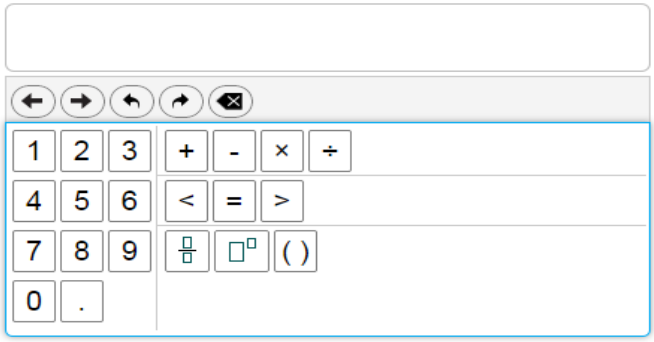
	MAFS.6.NS.3.6a, b, c
1	
2	Three values on a number line are labeled f, g, and h. $f = -4$ $g = -g$ $h = -f$ Which number line correctly shows the values of f, g, and h? Ⓐ  Ⓑ  Ⓒ  Ⓓ 
3	Each mark on the number line represents one unit. Plot a point on the number line that represents the opposite of -5 units. Select a place on the number line to plot the point. 
4	Point Q is plotted on the coordinate plane. 

	Point *Q* is reflected across the *x*-axis. What are the coordinates of the reflection of point *Q*? Enter your answer in the space provided. Enter **only** your answer. 
5	Select the point on the number line located at $-\frac{3}{4}$. 

	MAFS.6.NS.3.6a, b, c – FSA PRACTICE
1	Plot and label each point on the graph: $N\ (-3,-8)$ $P\ (0,9)$ $Q\ (-8.5,0)$ $R\ (4.5,-3)$ 
2	What is the opposite of -15? Write your answer in the space provided. 
3	In what quadrant is the point (5, 4)? Write your answer in the box. 

4	What is the opposite of 46? Write your answer in the space provided. 
5	In what quadrant is the point (−7, −16)? Write your answer in the box. 
6	Write in the given rational numbers into the correct order on the number line from least to greatest.  

	MAFS.6.NS.3.7a, b, c, d
1	A US Navy submarine, SeaWolf, is 40 feet below sea level while another, Nautilus, is 100 feet below sea level. Part A Write integers that describe each submarine's position relative to sea level. SeaWolf | Nautilus Part B Write an inequality that compares these integers. 
2	**Part A** Suppose it is 0 °F in Chicago today. Write an inequality that shows the relationship between 0 °F and -54 °F. 

	Part B Suppose it is 20 °F in St. Louis. Write an inequality that shows the relationship between 20 °F and -60 °F. Write your answer in the space provided. 
3	What value is the furthest from 0 on the number line? Ⓐ -20 Ⓑ -22 Ⓒ $\lvert 21.5 \rvert$ Ⓓ $\lvert -22.5 \rvert$
4	Chicago has a temperature of -8°F. Seattle has a temperature colder than Chicago. Select all value that could represent the temperature of Seattle. ☐ 13°F ☐ 10°F ☐ -10°F ☐ -13°F ☐ -21°F

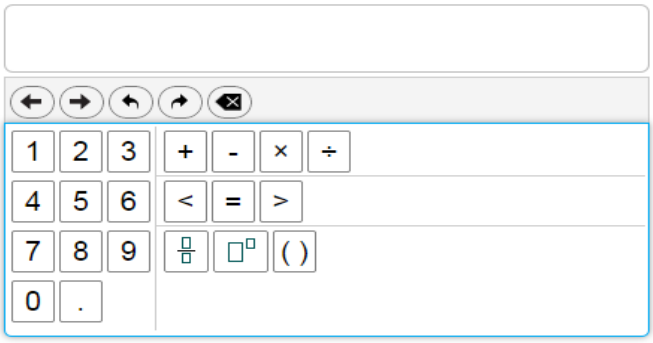
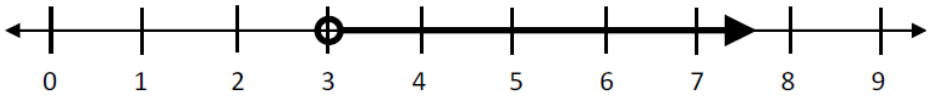
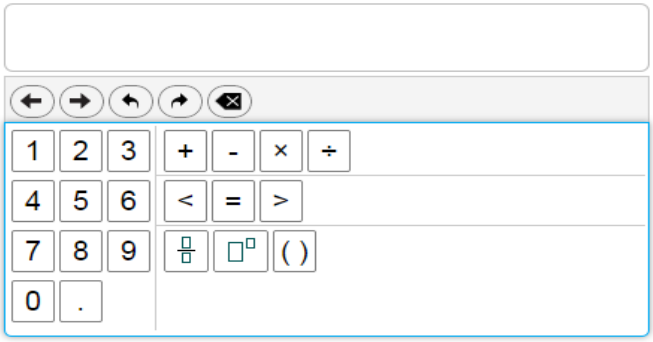
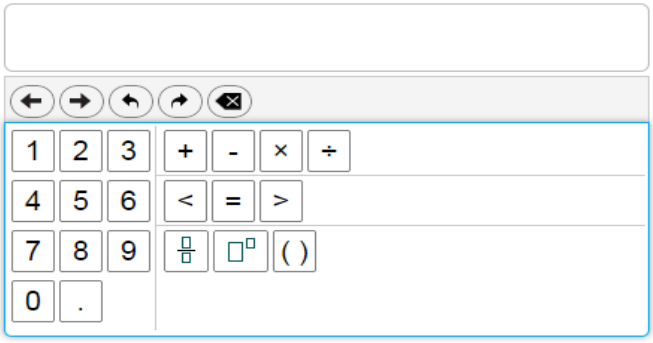
5

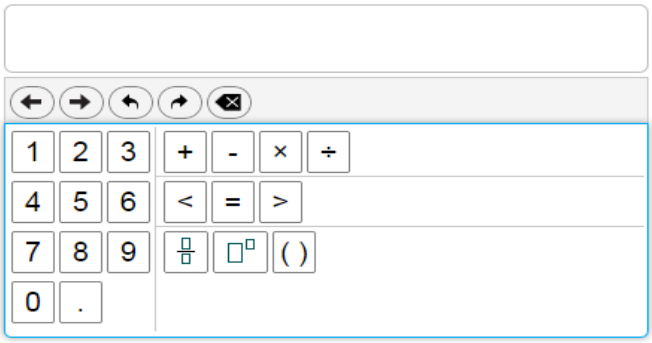
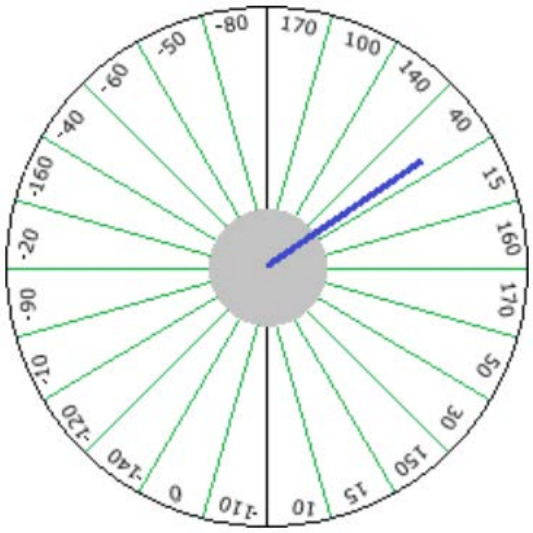
Trisha is making a poster about cities in her state. She does not want to include information about cities with an elevation greater than 350 feet below sea level. She researched the following information about five of the cities in her state.

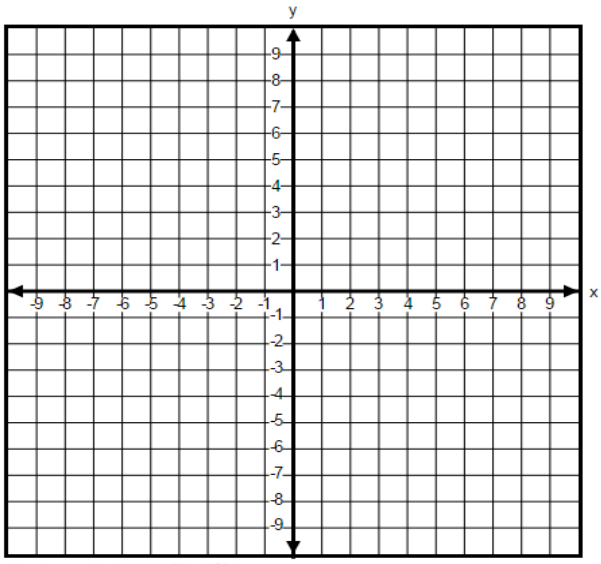
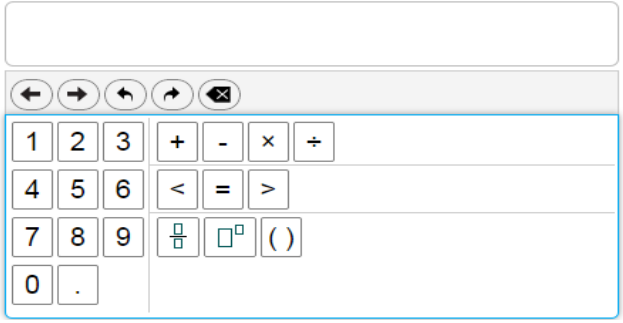
City	Sea Level
Atlantia	450 feet below sea level
Tysonia	225 feet above sea level
Maurian	350 feet below sea level
Los Hanicca	190 feet above sea level
San Bernadane	350 feet above sea level

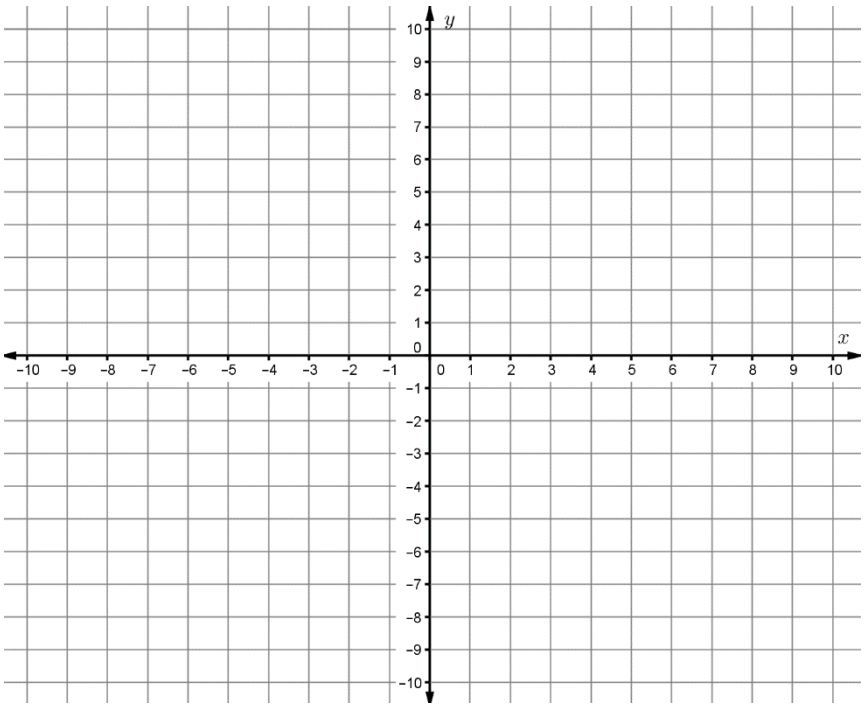
Which cities did she include on her poster?

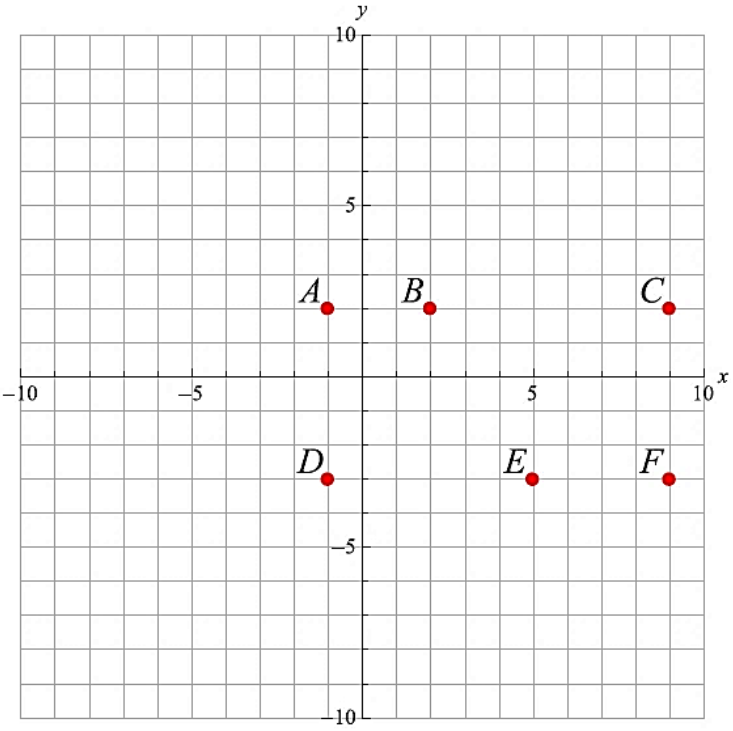
- ☐ San Bernadane
- ☐ Atlantia
- ☐ Tysonia
- ☐ Maurian
- ☐ Los Hanicca

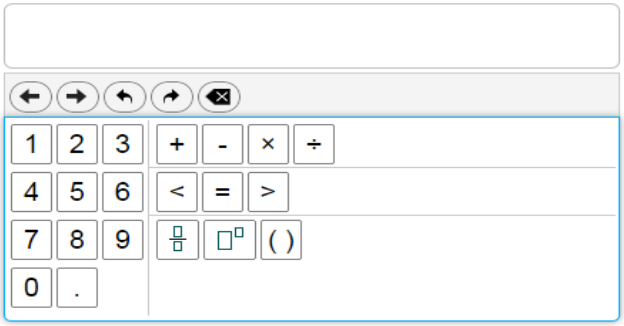
	MAFS.6.NS.3.7a, b, c, d – FSA PRACTICE
1	Express in an inequality that $-8.5℃$ is warmer than $-15℃$. Write your answer in the space provided. 
2	What inequality does the number line show?  Write your inequality in the space provided. 
3	Reggie's account balance is $-\$215$ dollars. How much money does Reggie owe? Write your answer in the space provided. 

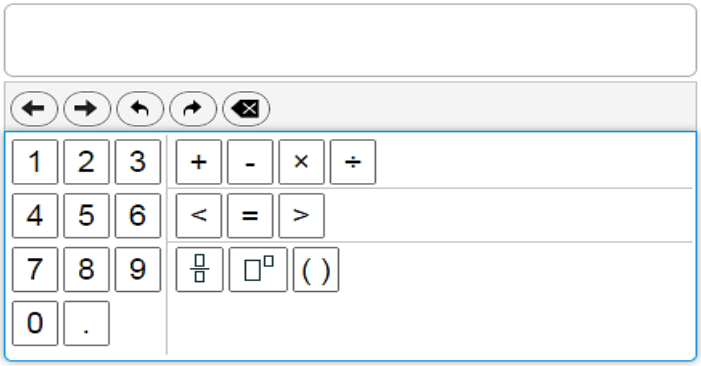
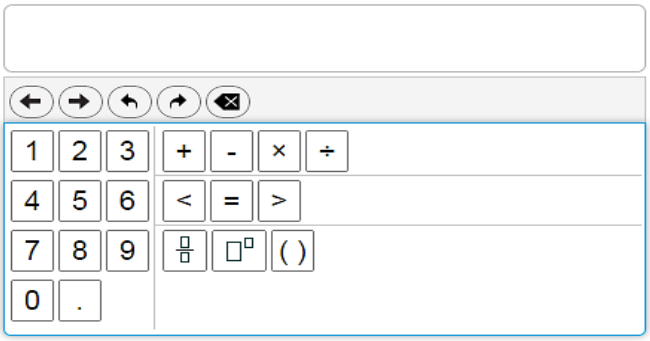
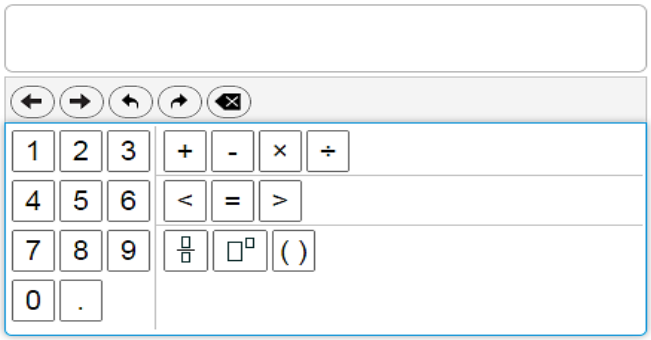
4	Is the absolute value of −36 greater or less than 45? Write your answer in the space provided? 
5	Hakeem played a game on the spinner. The game was played by spinning a pointer around the center of the playing field. The player is awarded points according to which number the pointer lands on.  Hakeem landed on the point values below. List them in order from least to greatest by writing your answers in the boxes. 15 -40 170 -120

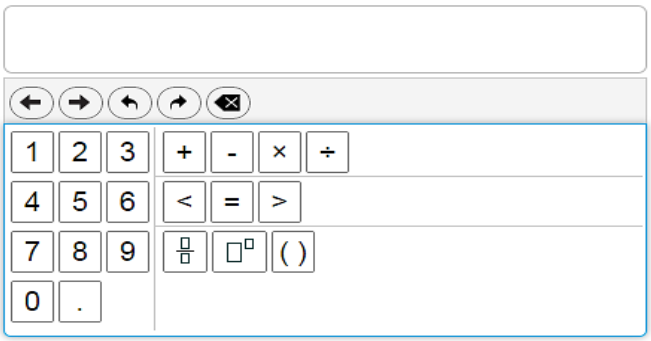
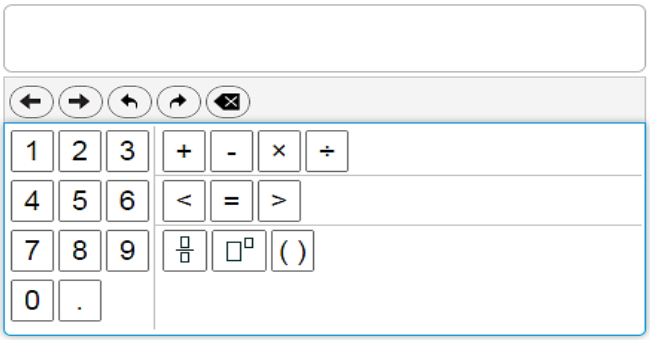
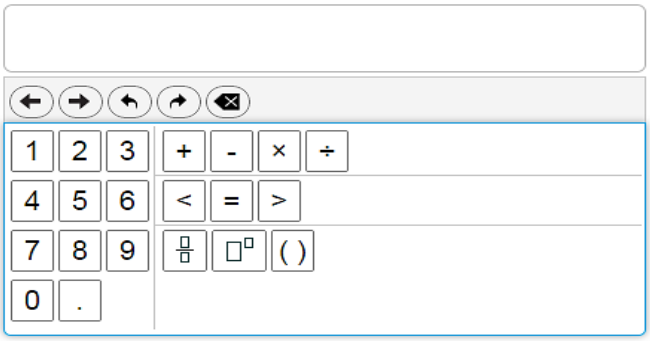
	MAFS.6.NS.3.8
1	City planners are creating a neighborhood map on a coordinate grid. The table shows the locations of the neighborhood library and school on a coordinate grid. **Neighborhood Planning** | Building	Location
Library	(−4, −6)
School	(5, −6) | In this coordinate grid, the distance between each gridline represents 1 mile. What is the distance between the library and the school on the grid? You can use the coordinate grid to help you find the answer by plotting the two points. Be sure to place your final answer in the box.  Enter your answer in the box. [ ] miles
2	What is the distance between the two points located at (3, 8) and (10, 8)? Write your answer in the space provided? 

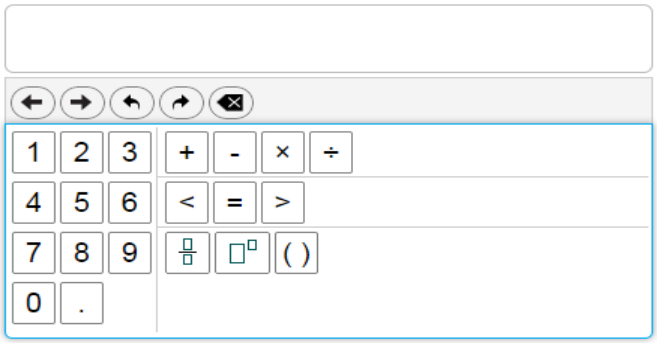
3	At school, a square area will be fenced in for students to park bicycles. The coordinates of two corners of the fence are (-3, -1) and (-3, -5). Plot the given points and the points of the two other corners so that the area enclosed is a **SQUARE.** 

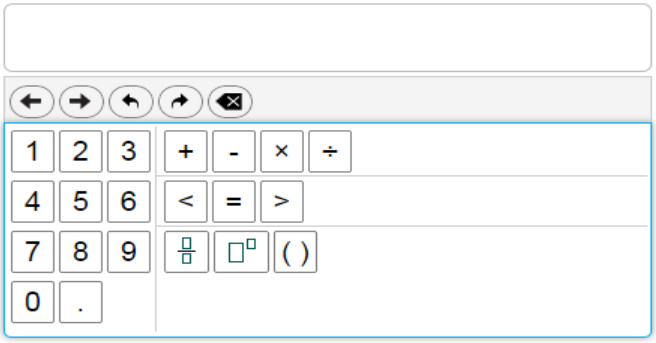
	MAFS.6.NS.3.8 – FSA PRACTICE
Refer to Figure 1 below to answer questions 1 and 2.  Figure 1.	
1	Of the labeled points in Figure 1, which is exactly 7 units from (9, 4) and 12 units from (−3, −3)? Write your answer in the box.
2	Of the labeled points in Figure 1, which is exactly 3 units from (5, 2) and 9 units from (2, −7)? Write your answer in the box.

3	What is the distance between the two points located at (2, 0) and (2, 4)? Write your answer in the space provided? 

	MAFS.6.EE.1.1
1	An expression is shown. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$ What is the expression written in exponential form? Enter your expression in the space provided. Enter **only** your expression. 
2	Which value is equivalent to the expression 2^4? Write your answer in the space provided. 
3	Write an expression that is equivalent to $5 \times 5 \times 5 \times 5 \times 5$. Write your answer in the space provided. 

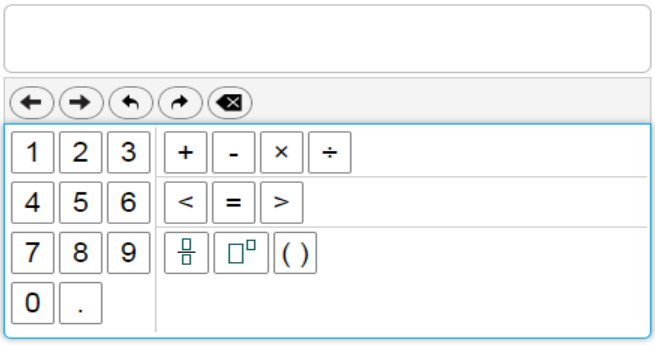
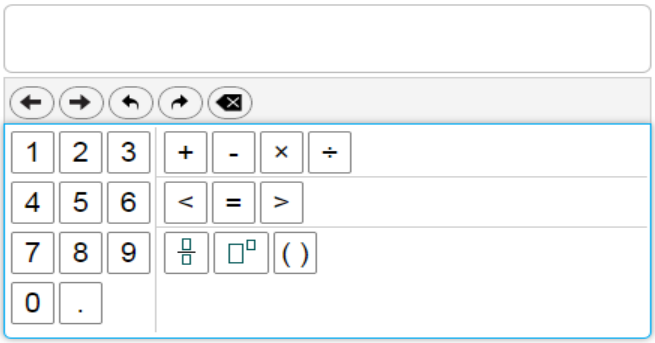
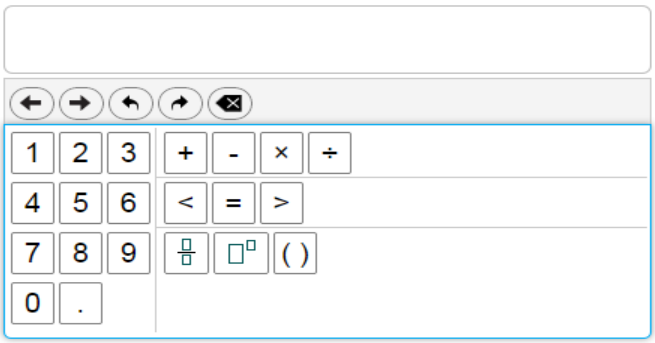
	MAFS.6.EE.1.1 – FSA PRACTICE
1	Write an expression that is equivalent to $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$. Write your answer in the space provided. 
2	Which value is equivalent to the expression 4^3? Write your answer in the space provided. 
3	Which value is equivalent to the expression $\left(\frac{2}{5}\right)^3$? Write your answer in the space provided. 

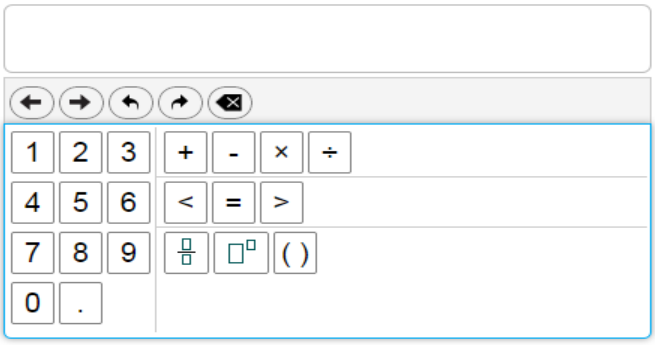
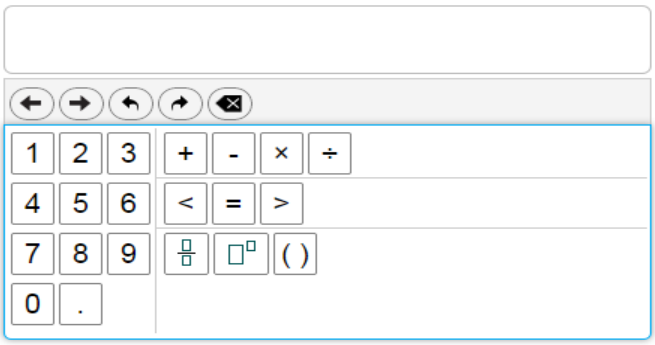
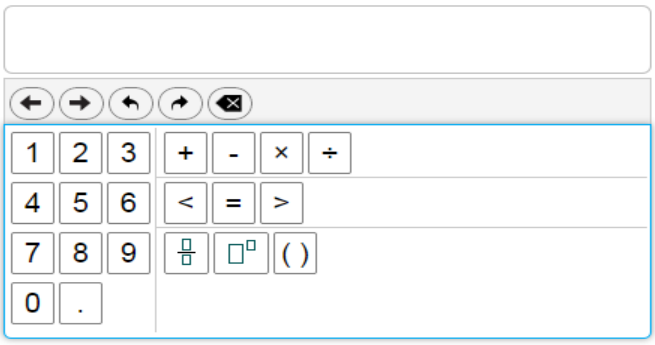
	MAFS.6.EE.1.2a, b, c
1	**Which expression represents "6 more than x"?** Enter your answer in the space provided. 
2	Write the correct word in the tiles to complete the pairs. Not all tiles will be used. Identify the different parts of the expression below. $\frac{3p^2}{5} + 8(24 - 2p)$ difference coefficient product sum quotient $2p$ ⟷ [ ] $\frac{3p^2}{5}$ ⟷ [ ] $24 - 2p$ ⟷ [ ] 3 ⟷ [ ]

3	Which of these expressions represents "the sum of 3 and n "? Select **all** that apply. ☐ A. $3n$ ☐ B. $n + 3$ ☐ C. $3 + n$ ☐ D. $n + n + n$ ☐ E. n^3
4	The volume of a cube is given by the expression s^3 and its surface area is given by the expression $6s^2$, where s is the length of the cube's side. What are the volume and surface area of a cube with a side length of 2 inches? Enter your answer in the space provided. 

	MAFS.6.EE.1.2a, b, c – FSA PRACTICE
1	Read the statement, and identify the expressions that are equivalent. Select all that apply *the sum of a number times 3 and 15* ☐ $15 + 3 \times n$ ☐ $3 \times 15n$ ☐ $15 + 3n$ ☐ $15 \times n + 3$ ☐ $(n \times 3) + 15$ ☐ $(n + 15) \times 3$
2	In Brad's golf bag, he has 3 times more white golf balls than yellow golf balls. He has 24 white golf balls in his bag. Which equation can be used to find how many yellow golf balls, y, Brad has in his bag? A. $3y = 24$ B. $3 + y = 24$ C. $24y = 3$ D. $24 + y = 3$

3	Select all of the problem situations that can be solved using the given equation. $$8x + 15 = 143$$ ☐ Samantha has a job babysitting. She earns $8 for every hour that she works. This week she earned $143, which included a $15 tip. ☐ Mr. Wilks mows lawns for extra money. Each lawn that he mows, he earns $15. After collecting the money for the lawns he mowed this week, he added the amount to the $8 in his wallet, totaling $143. ☐ Roger works in the meat section of a grocery store. So far this morning, he has cut 8 salmon steaks. In the meat display, there are several rows of 15 salmons steaks. When Roger puts the cut salmon steaks in the meat display, there will be 143 salmon steaks. ☐ Ms. Williams was looking for pencils. She found a box with 15 pencils in the drawer. Then, she found some unopened packages with 8 pencils in each package. After counting all of the pencils, she had 143 pencils.
4	Describe the expression. $2 \times 5 + 7(3 + 13)$ Which of the following describes 7 in the expression above? A. factor B. sum C. quotient D. product

	MAFS.6.EE.1.3
1	Write an expression that is equivalent to 4(w+3) – 2. Enter your answer in the space provided. 
2	Write an expression that is equivalent to 3(2n+3) + 9. Enter your answer in the space provided. 
3	Write an expression that is equivalent to 4(b+2) – 3b. Enter your answer in the space provided. 

	MAFS.6.EE.1.3 – FSA PRACTICE
1	Write an expression that is equivalent to $3(2t + 6) - 4t$. Enter your answer in the space provided. 
2	Write an expression that is equivalent to $6(7x - x)$. Enter your answer in the space provided. 
3	Write an expression that is equivalent to $z + z + z + z$. Enter your answer in the space provided. 

<table>
<tr><td></td><td>MAFS.6.EE.1.4</td></tr>
<tr><td>1</td><td>Select each expression that is equivalent to $3(n+6)$.

Select all that apply.

☐ A. $3n+6$

☐ B. $3n+18$

☐ C. $2n+2+n+4$

☐ D. $4(n+6)-(n+6)$

☐ E. $4(n+6)-(n-6)$</td></tr>
<tr><td>2</td><td>Mark yes or no on all of the expressions below that are equivalent to 6(y + 1).

<table>
<tr><th>Expressions</th><th>Yes</th><th>No</th></tr>
<tr><td>6y + 1</td><td>☐</td><td>☐</td></tr>
<tr><td>6y + 7</td><td>☐</td><td>☐</td></tr>
<tr><td>6(y) + 1(y)</td><td>☐</td><td>☐</td></tr>
<tr><td>6(y) + 6(1)</td><td>☐</td><td>☐</td></tr>
<tr><td>6y + 6</td><td>☐</td><td>☐</td></tr>
</table></td></tr>
<tr><td>3</td><td>Which expression is equivalent to (8x + 14) + (9x - 5)?

A. 22x - 4
B. 31x - 5
C. 17x + 19
D. 17x + 9</td></tr>
</table>

	MAFS.6.EE.1.4 – FSA PRACTICE
1	Write each expression in the correct location on the table. Identify each expression as equivalent to either $2(3x + 7y)$ or $\frac{1}{2}(12x + 14y)$. $6x + 7y$ $6x + 14y$ $(2x + 3y) + 4(x + y)$ $(2x + 4y) + 2(2x + 5y)$ **Expressions Equivalent to $2(3x + 7y)$** | **Expressions Equivalent to $\frac{1}{2}(12x + 14y)$**
2	Which expression is equivalent to $21x + 9 - 3x$? A. $9(2x - 1)$ B. $9(x + 1)$ C. $9(2x + 1)$ D. $18(x + 1)$
3	Which expression is equivalent to $(4x + 11) + 7x$? A. $22x$ B. $(4x + 7x) + 11$ C. $(4x + 11x) + 7$ D. $(4x - 7x) + 11$

<table>
<tr><td></td><td>MAFS.6.EE.2.5</td></tr>
<tr><td>1</td><td>Let x represent any number in the set of even integers greater than 1.

Which inequality is true for all values of x?

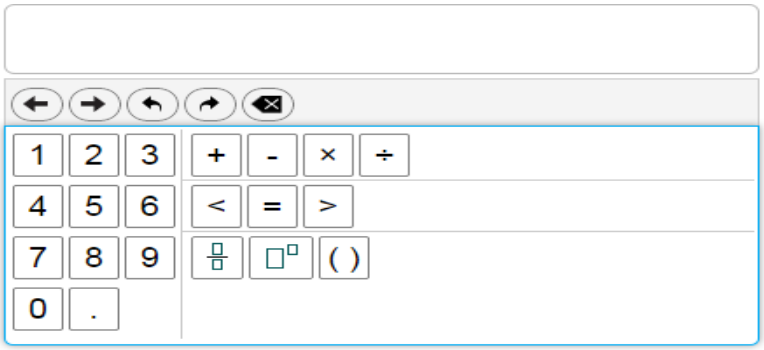
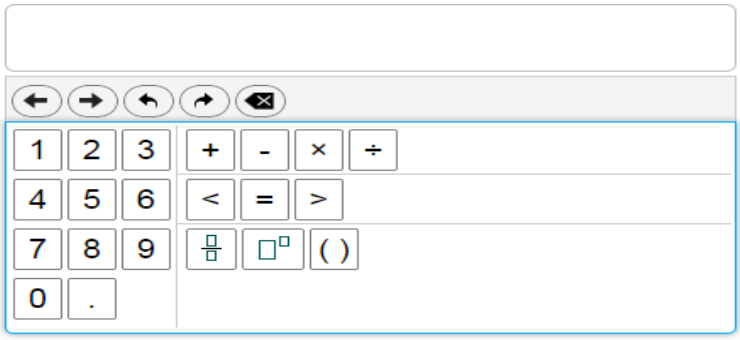
Ⓐ $x < 0$
Ⓑ $x > 0$
Ⓒ $x < 4$
Ⓓ $x > 4$</td></tr>
<tr><td>2</td><td>Mark yes or no if the values can be substituted for the variable to make the equation true.

<table>
<tr><th>Equations</th><th>Yes</th><th>No</th></tr>
<tr><td>$5a - 1 = 14$
true for $a = 3$</td><td>☐</td><td>☐</td></tr>
<tr><td>$100 - b^2 = 80$
true for $b = 10$</td><td>☐</td><td>☐</td></tr>
<tr><td>$32 = 16f$
true for $f = 2$</td><td>☐</td><td>☐</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>From the set {1, 3, 6}, which of the values can be substituted for x to make the equation true.

$27 - 2x = 15$

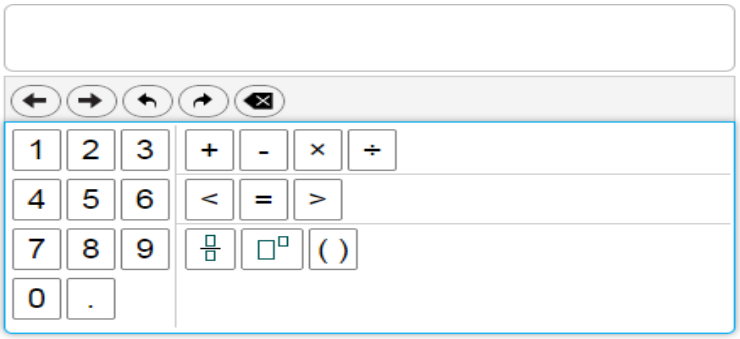
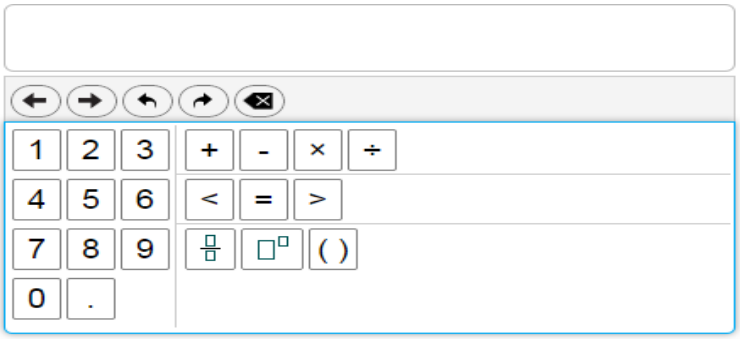
A. 3
B. 1
C. 6
D. none of these</td></tr>
</table>

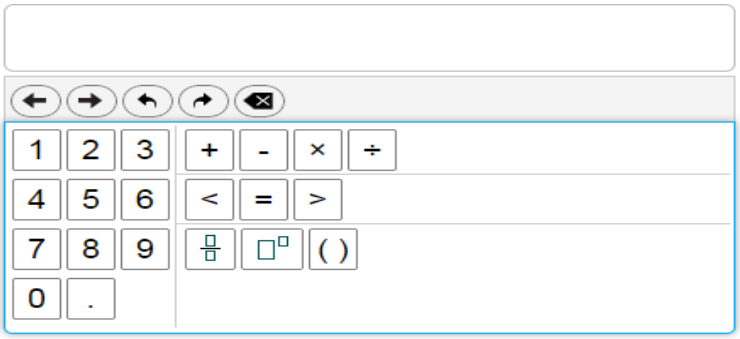
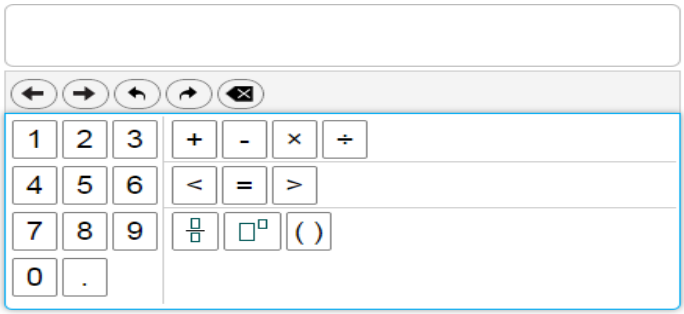
	MAFS.6.EE.2.5 - FSA PRACTICE
1	Solve each of the equations above and select the numbers that represent solutions to more than one of the six equations. Select all that apply. $4x - 3 = 17$ $\quad$ $8(x + 1) = 24$ $5(x - 2) = 20$ $\quad$ $34 - 7x = 20$ $31 - x = 29$ $\quad$ $3x + 6 = 21$ ☐ $x = 1$ ☐ $x = 2$ ☐ $x = 3$ ☐ $x = 4$ ☐ $x = 5$ ☐ $x = 6$
2	From the set {7, 15, 18}, which of the values can be substituted for c to make the equation true. $90 - 2c = 60$ A. 7 B. 18 C. none of these D. 15
3	From the set {5, 15, 23}, which of the values can be substituted for m to make the equation true. $4 + m < 19$ A. 15 B. none of these C. 23 D. 5

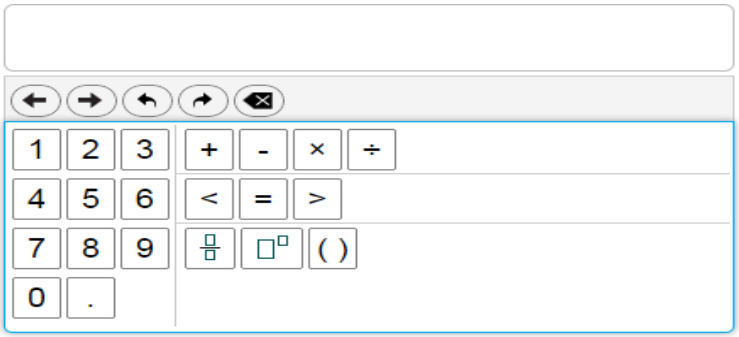
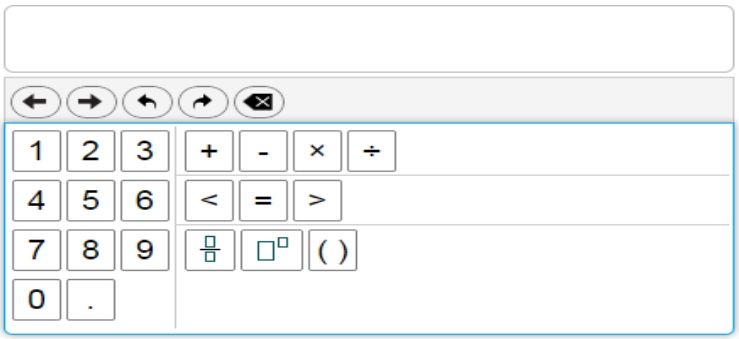
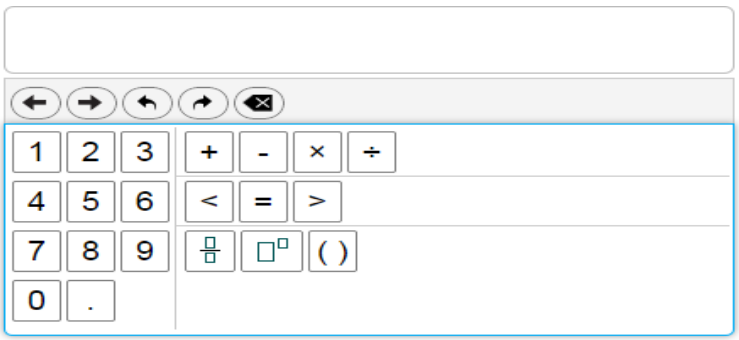
	MAFS.6.EE.2.6
1	Marshall took \$36.75 to a fair. Each ticket into the fair costs x dollars. Marshall bought 3 tickets. Which expression represents the amount of money, in dollars, that Marshall had after he bought the tickets? Ⓐ $36.75 - (3 + x)$ Ⓑ $36.75x - 3$ Ⓒ $36.75(3) - x$ Ⓓ $36.75 - 3x$
2	Marshall took \$36.75 to the state fair. Each ticket into the fair costs x dollars. Marshall bought 3 tickers. Write an expression that represents the amount of money, in dollars, that Marshall had after he bought the tickets. Enter your expression in the box. Enter **only** your expression. 
3	During a sale, all pillows are $\frac{1}{4}$ off the regular price. Write an expression that represents the amount of money saved on a pillow that had a regular price of ***d*** dollars. Enter your expression in the box. Enter **only** your expression. 

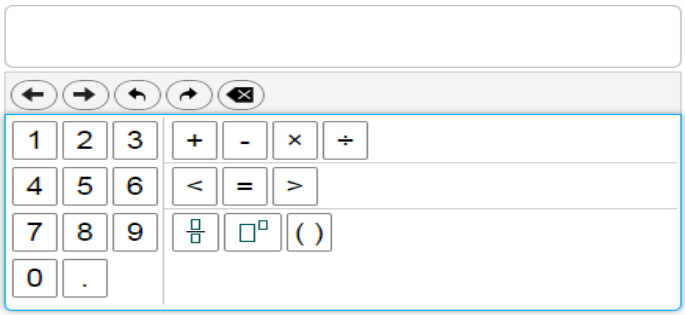
4	Each student at Madison High School owns three spiral notebooks. Ms. Turner wants to calculate the total number of notebooks in the middle school. What variable is needed to calculate the total? A. *r*, the number of students with red notebooks B. *t*, the number of teachers who have notebooks C. *n*, the number of spiral notebooks per student D. *s*, the number of students at the school

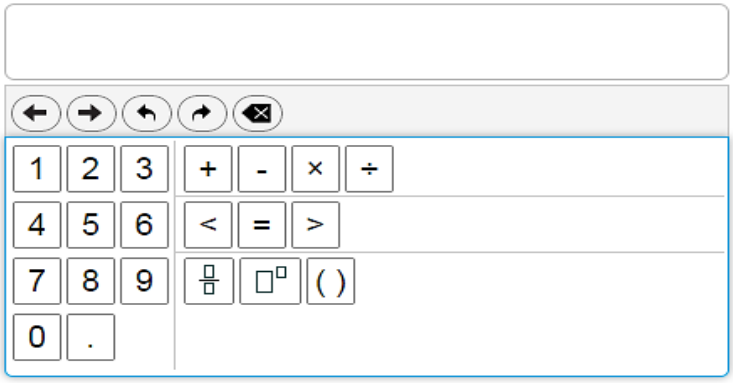
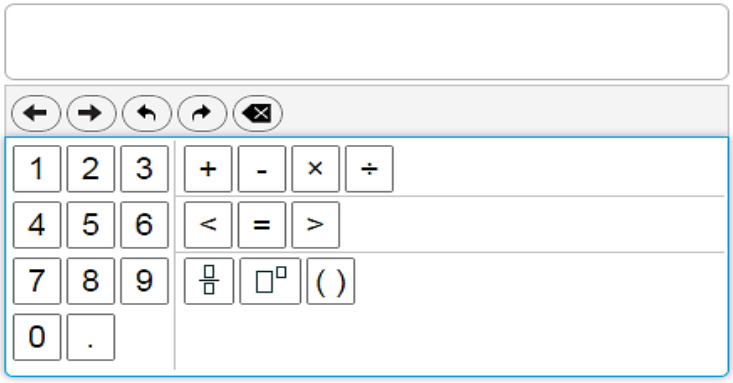
	MAFS.6.EE.2.6 – FSA PRACTICE
1	It takes Allison ten minutes to fill a dozen water balloons. She wants to calculate how long it will take her to fill all the water balloons if each friend at her party gets a dozen balloons. What variable is needed to calculate the time it will take to fill all the balloons? A. *b*, the number of bags of water balloons Alisa bought B. *f*, the number of friends attending Alisa's party C. *d*, the amount of time it takes Alisa to fill a dozen balloons D. *s*, the number of students in Alisa's math class
2	Gavin has ten identical U.S. coins in his pocket. The total value of the coins in cents is represented by $10x$. What does the variable x represent? Write your answer in the box.
3	Regina wanted an increase in her weekly allowance from \$5 to \$10, but her parents did her one better. Instead, Regina rolls a fair, six-sided die every week, and her allowance for that week will be the number she rolls multiplied by 2. Write and expression where *n* represents the number on the die that Regina rolls that week. Write your answer in the box.
4	Nadine scored five points more than Mark. Write an expression to represent the number of points Nadine scored. Write your answer in the box.

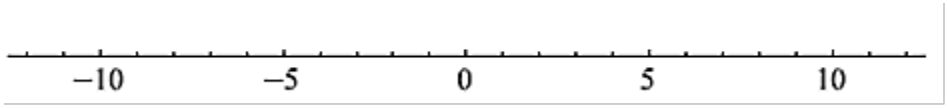
	MAFS.6.EE.2.7
1	Kellie bought 8 towels and spent $39.60. Each towel costs the same amount. **Part A** Use the drop-down menus to create an equation that can be used to determine ***t***, the price, in dollars, of 1 towel. ***t*** Choose... (+, −, ×, ÷) Choose... (8, 39.60) = Choose... (8, 39.60) **Part B** What is the price, in dollars, of 1 towel? Write your answer in the box. 
2	An equation is shown. $n + 5 = 23$ What is the value for n that makes the equation true? Write your answer in the box. 

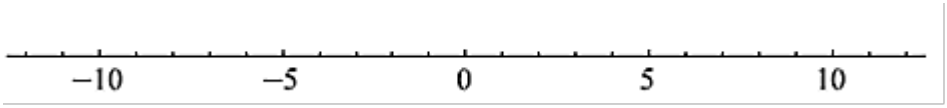
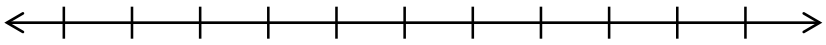
3	Tanner is planning a trip to his uncle's house out of town. It usually takes him $2\frac{1}{2}$ hours to drive to his uncle's house, but due to road construction, it will take him an additional h hours driving to complete the trip in 5 hours. Write the equation and find the value of h that will make the equation true. Write your answer in the box. 
4	An equation is shown. $\frac{1}{6}x = \frac{2}{3}$ What is the value for x that makes the equation true? 

	MAFS.6.EE.2.7 – FSA PRACTICE
1	An equation is shown. $4t = 50$ What is the value for t that makes the equation true? Write your answer in the box. 
2	A small university has six identical parking lots that hold a total of 1110 cars. Write an equation to find the number of cars each parking lot can hold. Solve the equation. Write your answer in the box. 
3	A solar panel generates $\frac{3}{5}$ of a kilowatt of power. A warehouse wants to generate 24 kilowatts of power. Write an equation to find how many solar panels the warehouse will need on its roof to generate 24 kilowatts of power. Solve the equation. Write your answer in the box. 

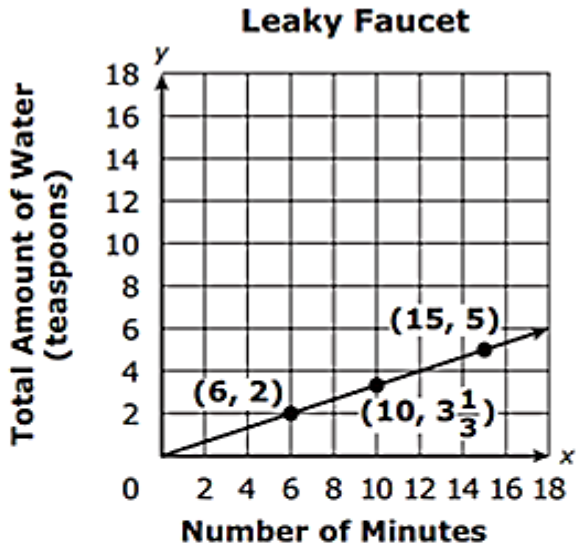
4	An equation is shown. $\frac{1}{8}r = \frac{1}{4}$ What is the value for x that makes the equation true? 

	MAFS.6.EE.2.8
1	Cirrus clouds form more than 6,000 meters above Earth. Write an inequality to represent h, the height, in meters, or cirrus clouds. Write your answer in the box below. 
2	Translate the following sentence to an inequality. It's colder than $-2°\mathrm{F}$ outside right now. Write your answer in the box below. 
3	According to Interstate Highway Standards, U.S. and state highway traffic lanes must be at least 12 feet wide. Write an inequality to represent the widths that traffic lanes can be. Write your answer in the box below. 

4	Draw a number line to represent the inequality $m < 0$. 

	MAFS.6.EE.2.8 – FSA PRACTICE
1	According to historical records, the highest price for regular gas in Florida over the last ten years was just under $4.06. Write an inequality to represent Florida's gas prices over the last ten years. Write your answer in the box below.
2	Draw a number line to represent the inequality $p > -3$. 
3	At an amusement park, the height, h, that a person must be in order to ride the roller coaster is given by the inequality $h > 48$ inches. **Part A** Label and graph this inequality.  **Part B** Mark yes or no next to the values from the list below to show if it satisfies the above inequality.

Value	Yes	No	Value	Yes	No
47.9 inches	☐	☐	$50\frac{3}{4}$ inches	☐	☐
$48\frac{1}{4}$ inches	☐	☐	48 inches	☐	☐
4.899 inches	☐	☐	$\frac{48}{2}$ inches	☐	☐
48.00 inches	☐	☐	$40\frac{8}{10}$ inches	☐	☐

	MAFS.6.EE.3.9
1	The graph shows the number of teaspoons of water, y, that have dripped from a leaky faucet at the end of x minutes.  Which equation represents the relationship between x and y shown in the graph? Ⓐ $y = 3x$ Ⓑ $y = x - 3$ Ⓒ $y = \frac{1}{3}x$ Ⓓ $y = x + 3$

2

A school band performed a concert on four different days. The band sold tickets and snacks each day of the concert for a fundraiser. The first table shows the number of tickets sold and the amount of money collected from ticket sales. The second table shows the number of snacks sold and the amount of money collected from snack sales.

Concert Ticket Sales

Day	Number of Tickets Sold	Amount Collected (dollars)
1	50	275.00
2	47	258.50
3	62	341.00
4	75	412.50

Snack Sales

Day	Number of Snacks Sold	Amount Collected (dollars)
1	43	53.75
2	36	45.00
3	60	75.00
4	65	81.25

Part A

If each snack costs the same price, what is the price per snack?

Enter your answer in the box.

$ [ ]

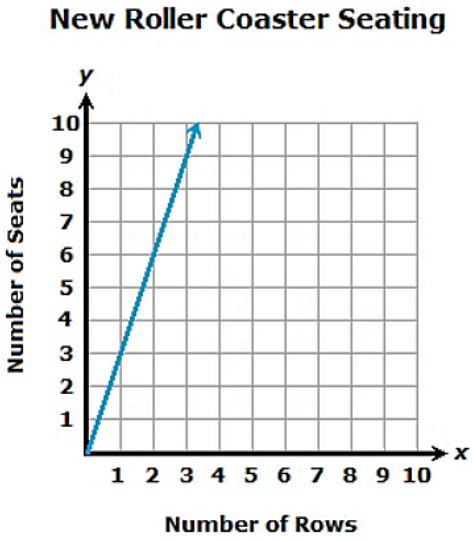
Part B

Write an equation that can be used to find y, the amount of money collected for selling x concert tickets.

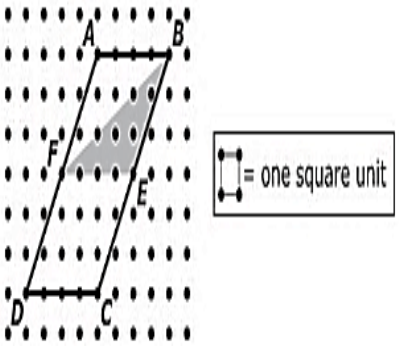
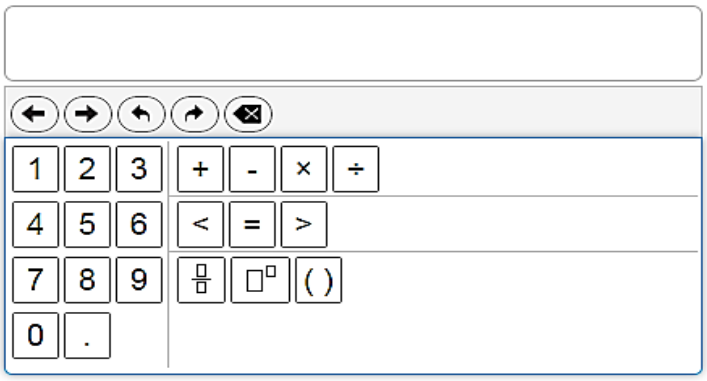
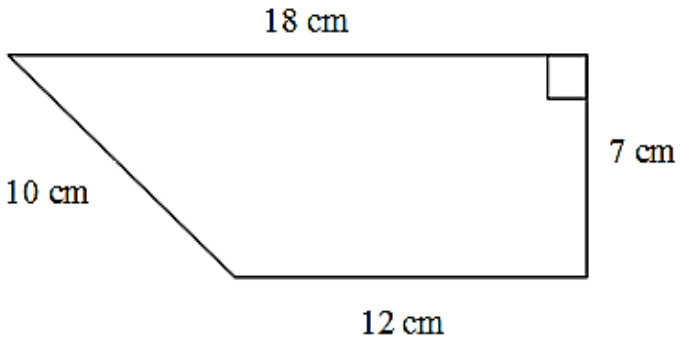
Enter your equation in the box.

[ ]

3	A coffee storage bin contains 1500 grams of coffee beans. To make a cup of coffee, n grams of coffee beans are removed. **Part A** Write an equation to model the relationship between the quantity of coffee beans removed, n, and the quantity of coffee beans remaining in the storage bin, q. Write your answer in the box below. **Part B** Identify the indedendent and dependent variables in your equation.
4	Lisa is going on a long-distance bike ride with her friends. They will ride at a rate of 10 miles every hour. Write an equation that relates the distance, d, that Lisa travels to the number of hours, h, she has ridden. Write your answer in the box below.

	MAFS.6.EE.3.9 – FSA PRACTICE
1	A new roller coaster has three seats in each row. The following shows how the number of seats, y, changes as the number of rows, x, changes.  Which equation shows this relationship? A. $3y = x$ B. $y = x + 3$ C. $y = 3x$ D. $y + 3 = x$
2	A manual coffee grinder holds 200 grams of coffee and grinds 2 grams every time the crank is turned. **Part A** Write an equation to show the relationship between the number of times the crank is turned, t, and the amount of coffee remaining, c. Write your answer in the box below. **Part B** Identify the indedendent and dependent variables in your equation. Write your answer in the box below.

3	Ms. Roberts makes bouquets of flowers. Every bouquet she makes, she includes eight flowers. The table below shows the number of flowers, f, that Ms. Roberts uses to make b bouquets. Fill in the missing values in the table. **Number of Bouquets, *b*** | **Number of Flowers, *f*** 4 | ☐ ☐ | 64 ☐ | 96 Ms. Roberts continued to make bouquets today. She used 224 flowers today to make ☐ bouquets.

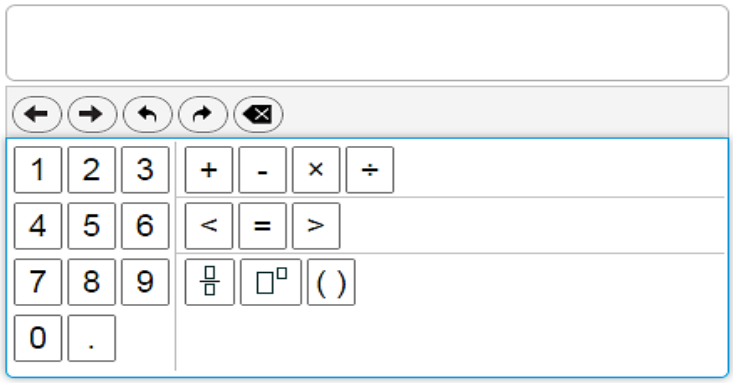
	MAFS.6.G.1.1
1	An advertising company is designing a new logo that consists of a shaded triangle inside a parallelogram.  **Part A** What is the area, in square units, of parallelogram $ABCD$? Enter your response in the answer box. square units **Part B** In the new logo, what fraction of the parallelogram is shaded? Give your answer as a fraction. 
2	Find the area of the trapezoid by composing into rectangles or decomposing into triangles or other shapes as needed. Show your work neatly and completely.  Write your answer in the space below.

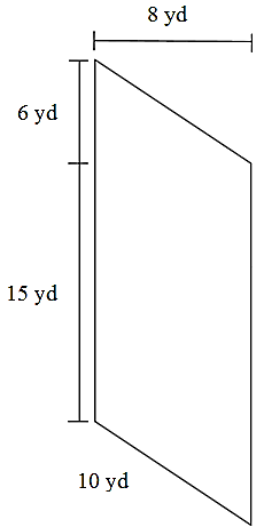
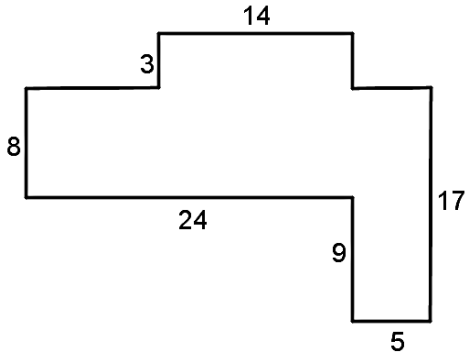
3

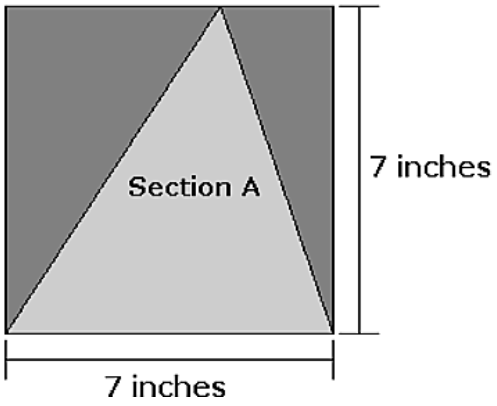
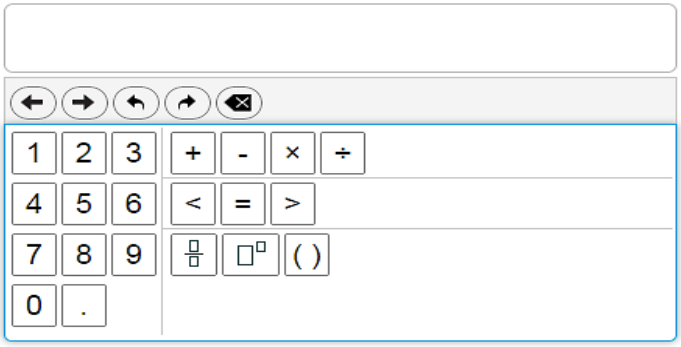
A shape is shown.

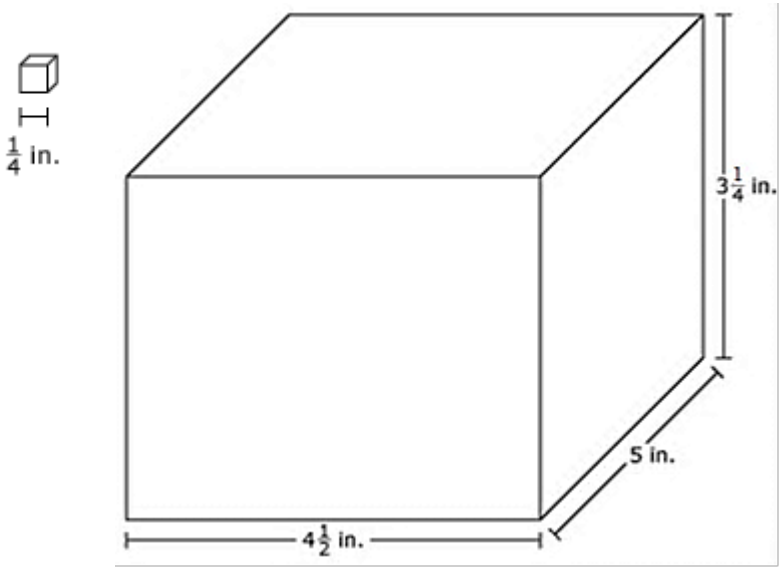
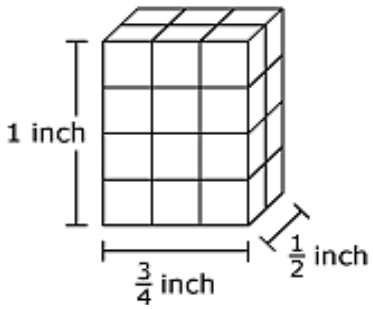
What is the area, in square inches, of the shape?

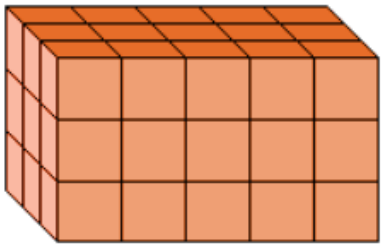
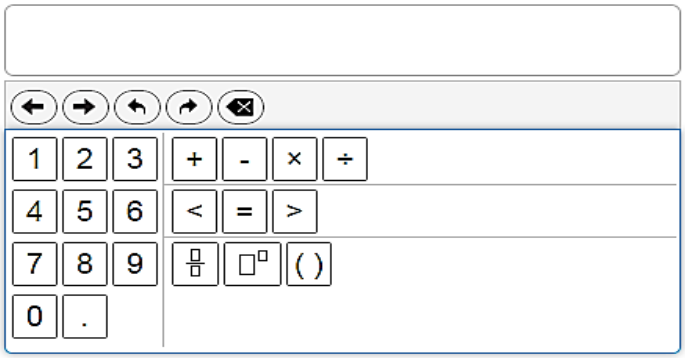
Write your answer in the space provided.

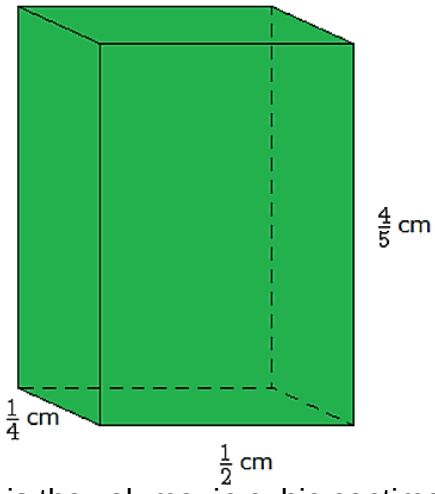
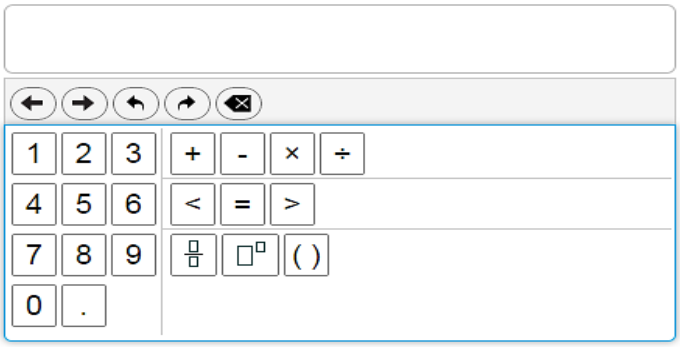
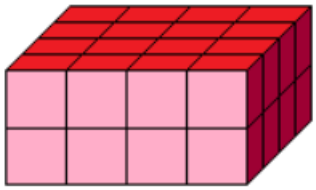
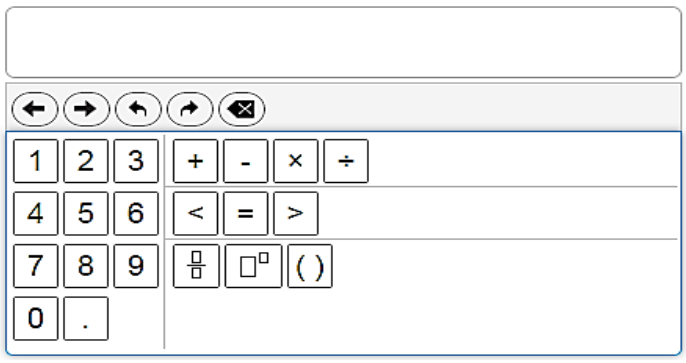


	MAFS.6.G.1.1 - FSA PRACTICE
1	Find the area of the parallelogram by composing into rectangles or decomposing into triangles or other shapes as needed. Show your work neatly and completely.  Write your answer in the space below.
2	A shape is shown.  What is the area, in square inches, of the shape? Write your answer in the space provided.

3	Daisy is cutting a piece of fabric to use as a section of a patchwork quilt. A section of the pattern quilt is shown below.  What is the area, in square inches, of Section A? Write your answer in the space provided. 

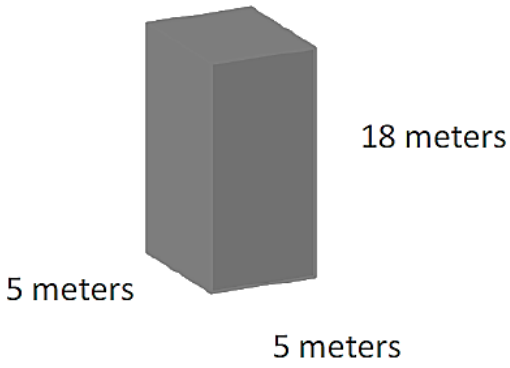
	MAFS.6.G.1.2
1	Small cubes with edge lengths of $\frac{1}{4}$ inch will be packed into the right rectangle prism shown.  How many small cubes are needed to completely fill the right rectangular prism? Enter your answer in the box. [ ] cubes
2	The right rectangular prism is built with small cubes.  What is the volume, in cubic inch(es), of the right rectangular prism? Enter your answer in the space provided. Enter **only** your fraction. [ ] 1 2 3 + - × ÷ 4 5 6 < = > 7 8 9 ( ) 0 .

3	The prism below is packed with no gaps between the cubes that measure $\frac{1}{2}$ cm.  What is the volume, in cubic centimeters, of the right rectangular prism? Write your answer in the space below. 

	MAFS.6.G.1.2 – FSA PRACTICE
1	A right rectangular prism is shown.  What is the volume, in cubic centimeters, of the prism? Write your answer in the space provided. 
2	The prism below is packed with no gaps between the cubes that measure $\frac{1}{4}$ ft.  What is the volume, in cubic feet, of the right rectangular prism? Write your answer in the space below. 

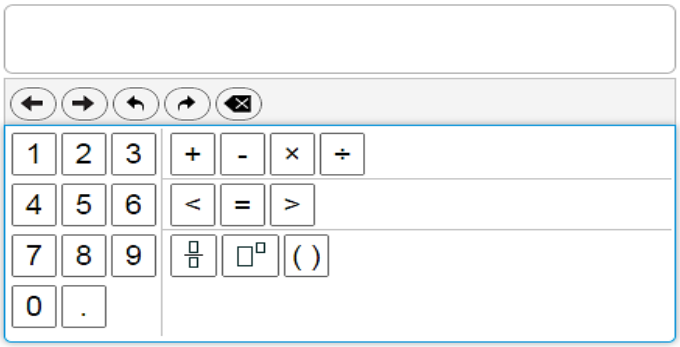
3

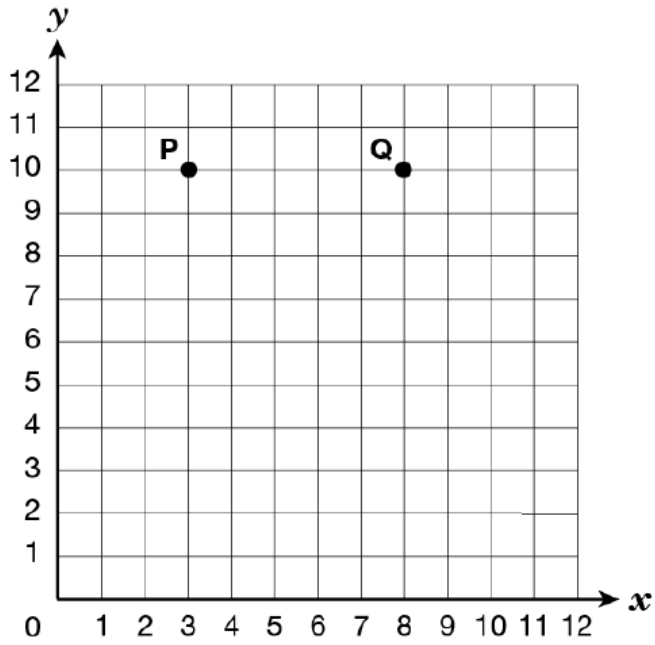
A right rectangular prism is shown.

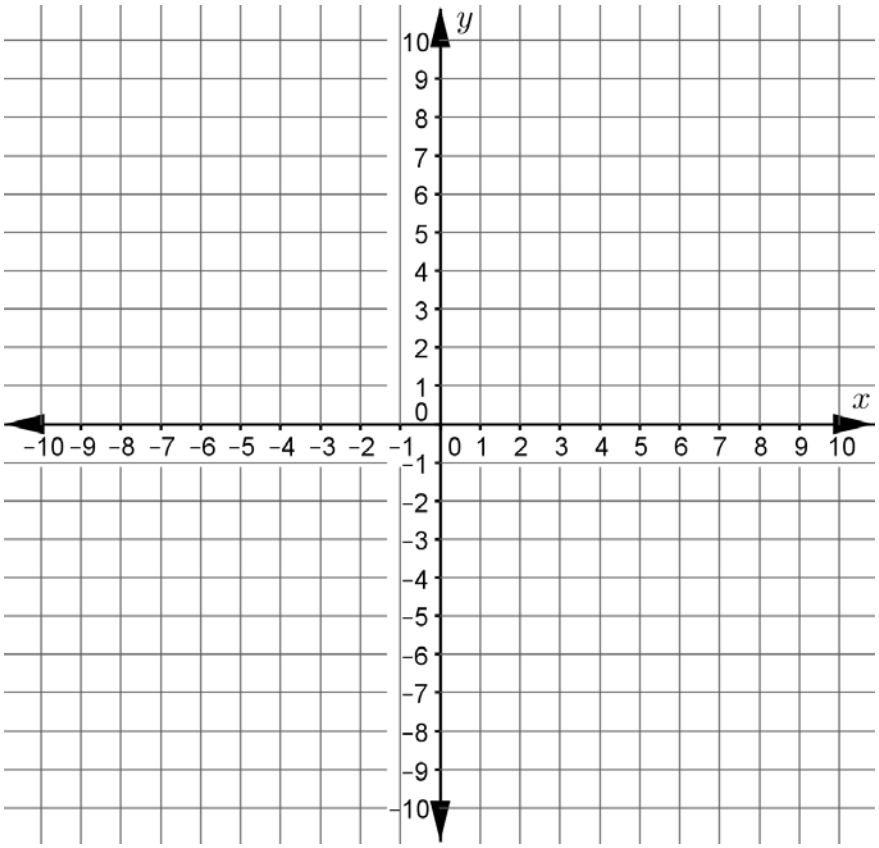


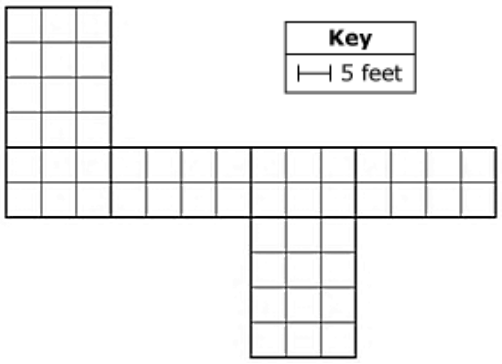
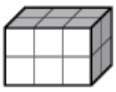
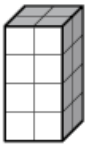
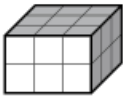
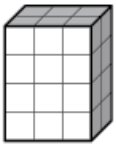
What is the volume, in cubic meters, of the prism?

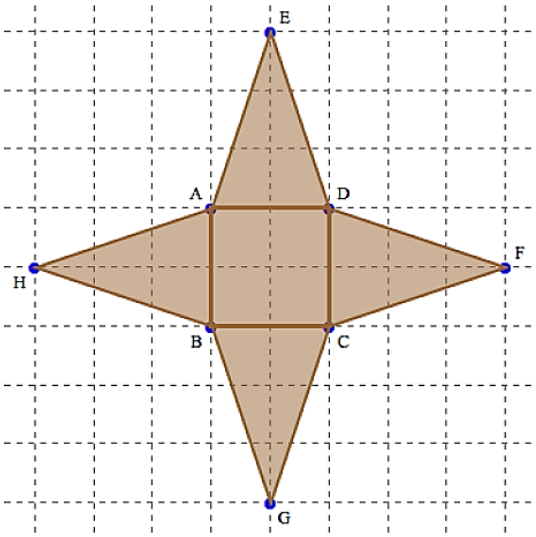
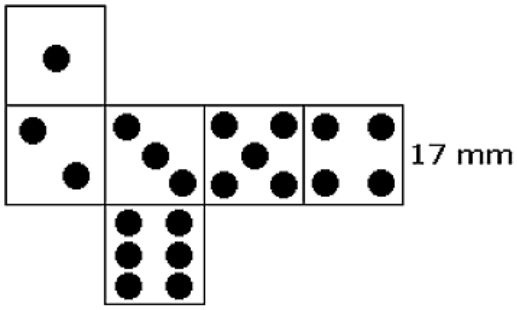
Write your answer in the space provided.

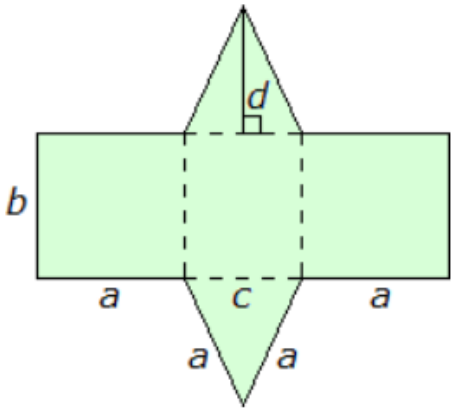
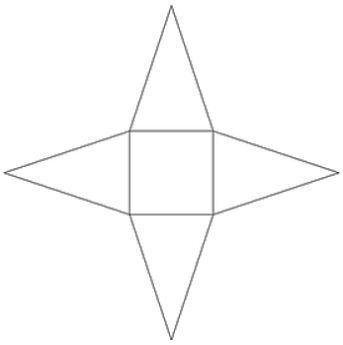


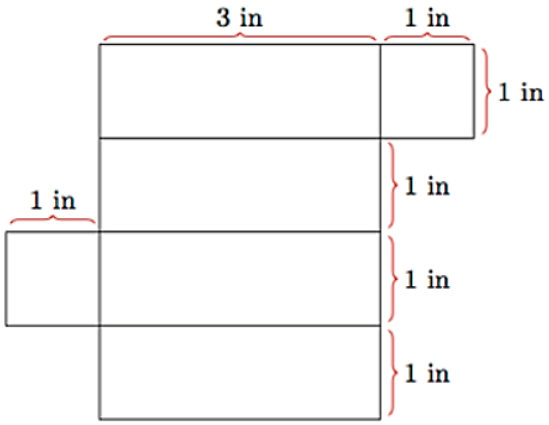
	MAFS.6.G.1.3
A designer wants to create a fountain with a base shaped like a hexagon. Use the grid and information below to answer questions 1 – 3.	
1	Vertices P and Q of hexagon PQRSTU are shown on the grid. Graph and label the other four vertices of the hexagon on the grid. • R(11, 6) • S(6, 6) • T(3, 2) • U(0, 6) 
2	What is the length of side PQ in units? Write your answer in the box. _____ units
3	If each side of the fountain is the same length, what is the perimeter of the fountain? Show your work or explain your answer in the box below.

	MAFS.6.G.1.3 – FSA PRACTICE
Celine's teacher asked her to use a diagram to determine the area of a patio with vertices at $\left(-7,-2\frac{1}{2}\right)$, $\left(2\frac{1}{2},-2\frac{1}{2}\right)$, $\left(2\frac{1}{2},-5\frac{1}{2}\right)$, and $\left(-7,-5\frac{1}{2}\right)$ on a coordinate grid. Use the grid and information below to answer questions 1 – 2.	
1	Graph and connect the points to create the polygon on the grid. 
2	What is the area of the polygon? Write your answer in the box. [ ] units
3	A polygon has its vertices at the following points. (2, 5), (4, 7), (7, 7), and (9, 5) What is the best description of this polygon? A. trapezoid B. pentagon C. rhombus D. rectangle

	MAFS.6.G.1.4
1	This is a net of a right rectangular prism.  **Part A** Which prism can be made using the net? A.  B.  C.  D.  **Part B** What is the surface area, in square feet, of the prism? Write your answer in the box. square feet

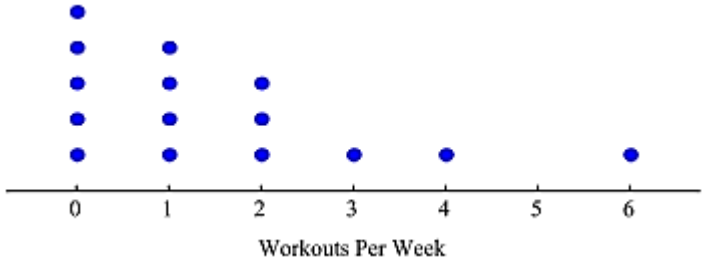
2	A net is shown. Which 3-dimensional figure is represented by the net?  Write your answer in the space below.
3	Tara is finding the surface area of one die. She drew a net of the die, which is shown below.  What is the surface area of the die? Write your answer in the space below.

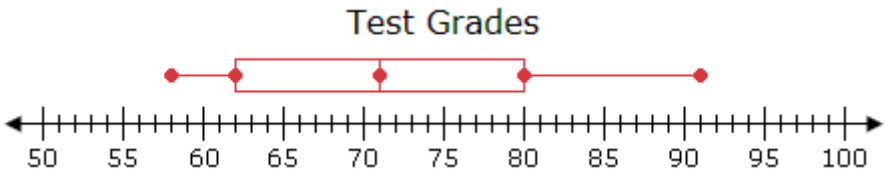
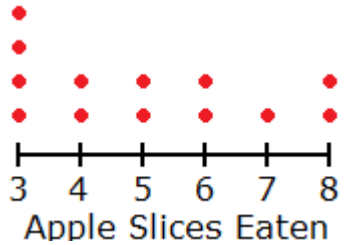
	MAFS.6.G.1.4 – FSA PRACTICE
1	A tent company has a tent design that is a triangular prism. The following is a net of the design.  If a = 82 inches, b = 83 inches, c = 60 inches, and d = 76 inches, how much fabric is needed to make the tent? Write your answer in the box below.
2	Below is a net for a three dimensional shape. The inner quadrilateral is a square and the four triangles all have the same size and shape.  **Part A** What three dimensional shape does this net make? Write your answer in the box below. **Part B** If the side length of the square is 2 units and the height of the triangles is 3 units, what is the surface area of this shape? Write your answer in the box below.

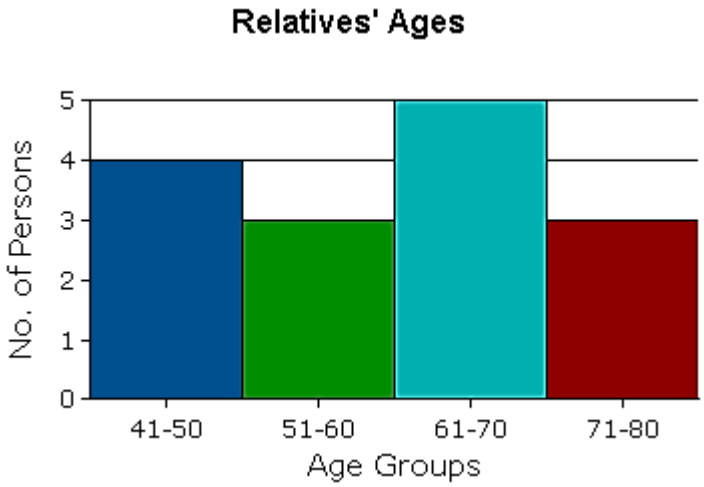
3	A rectangular prism net is shown.  What is the surface area of the net? Write your answer in the space below.

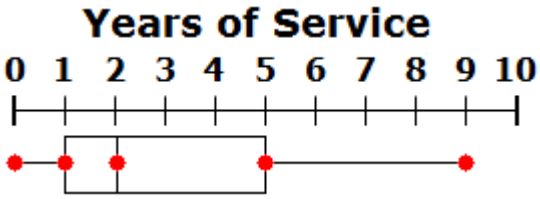
	MAFS.6.SP.1.1
1	Which question is a statistical question? ○ A. How tall is the oak tree? ○ B. How much did the tree grow in one year? ○ C. What are the heights of the oak trees in the schoolyard? ○ D. What is the difference in height between the oak tree and the pine tree?
2	Which of the following are statistical questions? Select all that apply. ☐ How many days are in March? ☐ How old is your dog? ☐ How old are the dogs on this street? ☐ What percent of people like watermelons? ☐ Do you like watermelons? ☐ How many bricks are in this wall? ☐ What was the highest temperature today in town?
3	The Johnson family is gathering information about different neighborhoods they are considering moving to. Things they are considering are schools, parks, the number of houses, and the type of yards. Which of the following are statistical questions that can be answered by the data gathered by the Johnson family? ☐ How many houses are in each neighborhood? ☐ What is the size of the largest yard in all the neighborhoods? ☐ How many students are enrolled in the smallest school? ☐ How many schools are in each neighborhood? ☐ How many houses have fences around the backyards?

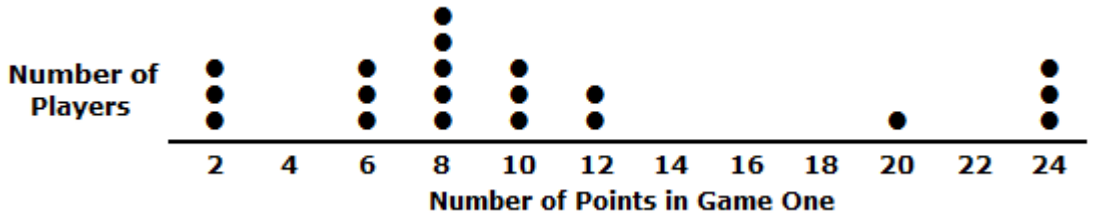
	MAFS.6.SP.1.1 – FSA PRACTICE
1	Which of the following is a statistical question? ○ A. How many players are on Greg's football team? ○ B. What volume of milk is used to make cupcakes according to Paula's cookbook? ○ C. How many students attend Natasha's school? ○ D. What are the checking account balances of the shoppers in a grocery store?
2	Last night, Jasmine and her family went out for dinner. The questions below came up on their way to the restaurant or during the meal. Decide whether or not each question is a statistical question. Select all that apply. ☐ How far are we from the restaurant? ☐ How long will it be until we get there? ☐ Would you rather have burgers or pizza? ☐ How much should we leave for the tip? ☐ What was the most frequently ordered dish in the restaurant this evening? ☐ Did you like the pizza tonight? ☐ Which table's bill was the highest? ☐ How many people were sitting at each table this evening?
3	Which of the following is a statistical question? ○ A. What is the name of the shortest student in Tina's science class? ○ B. What are the eye colors of the students in Tina's science class? ○ C. What color are Tina's eyes? ○ D. What is the highest grade in Tina's science class?

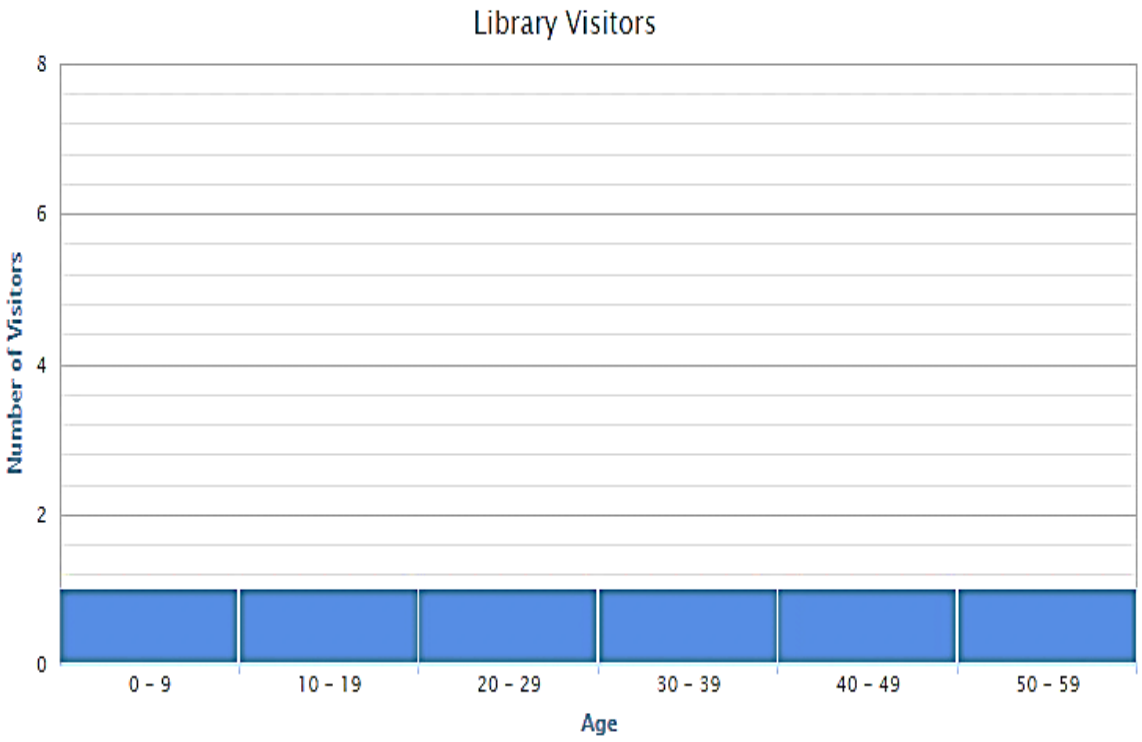
	MAFS.6.SP.1.2
Use the below dot plot to answer questions 1 – 3. A group of 15 math teachers were asked how many times per week they worked out. The results are displayed in the dot plot below.  	
1	What is the most common number of workouts per week? A. 0 B. 1 C. 2 D. 5
2	What part of the box plot represents the median of the data? A. 0 B. 1 C. 2 D. 5
3	What part of the box plot represents the spread of the data? A. 1 B. 2 C. 3 D. 6

	MAFS.6.SP.1.2 – FSA PRACTICE
1	 The quiz grades of 10 different students were used to create the box plot above. Which of the following represents the median of the set of grades? ○ A. 70 ○ B. 71 ○ C. 80 ○ D. 62
2	The dot plot below shows how many apple slices each girl at Kayla's party ate.  Which of the following represents the mean of the amount of apple slices eaten? A. 1.6 B. 65 C. 5 D. 6.5

3	The histogram shows the ages of relatives'.  Select the correct choice that shows where the range of most of the ages is displayed. A. 41 – 50 B. 51 – 60 C. 61 – 70 D. 71 – 80

	MAFS.6.SP.1.3
	Use the below dot plot to answer questions 1 – 4. After a company celebrated its ten year anniversary, the president of the company wanted to know how long employees have been with the company. Human resources provided the president with the box plot below. Use the dot plot to determine the best measures for the data. 
1	Based on the information in the dot plot, The best measure of center of the years of service is? A. mean B. median C. mean absolute deviation D. interquartile range
2	Based on the information in the dot plot, the best measure of variability of the years of service is? A. mean B. median C. mean absolute deviation D. interquartile range
3	Based on the information in the dot plot, the number that best summarizes the years of service is? A. 0 B. 1 C. 2 D. 4
4	Based on the data, the number that best describes how the data varies is? A. 0 B. 1 C. 2 D. 4

	MAFS.6.SP.1.3 – FSA PRACTICE
Use the below dot plot to answer questions 1 – 4. In game one of a high school basketball playoff, the number of points each participating player scored were recorded. Use the dot plot below to determine the best measures for the data.  	
1	Based on the information in the dot plot, the best measure of center of the points scored is? E. mean F. median G. mean absolute deviation H. interquartile range
2	Based on the information in the dot plot, the best measure of variability of the points scored is? E. mean F. median G. mean absolute deviation H. interquartile range
3	Based on the information in the dot plot, the number that best summarizes the points scored is? E. 5.3 F. 6 G. 8 H. 10.5
4	Based on the data, the number that best describes how the data varies is? E. 5.3 F. 6 G. 8 H. 10.5

	MAFS.6.SP.2.4
1	This table shows the ages of 20 visitors at a library. 15 27 53 9 48 3 56 12 10 15 18 15 2 31 20 21 33 6 52 56 Create a histogram that represents the data. Draw your histogram bars to the appropriate height. 

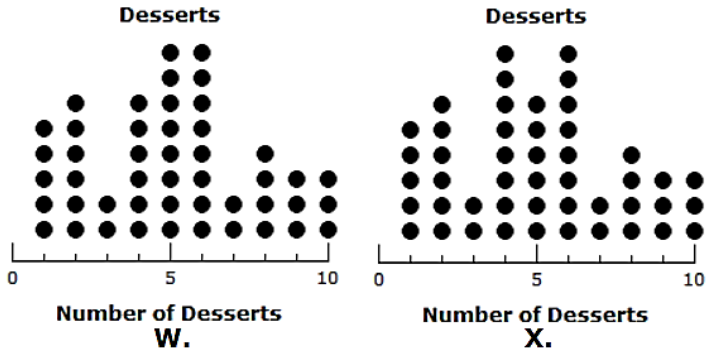
2

A bakery kept track of how many days they made different numbers of desserts, as shown on the table below.

Desserts	
Number of Desserts	Number of Days
1	5
2	6
3	2
4	8
5	6

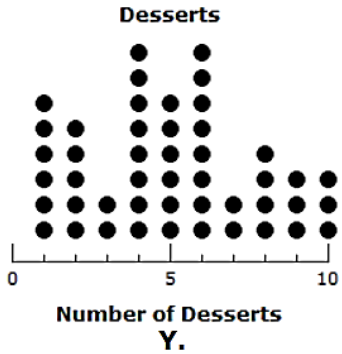
Desserts	
Number of Desserts	Number of Days
6	8
7	2
8	4
9	3
10	3

Which dot plot best displays the data in the table?

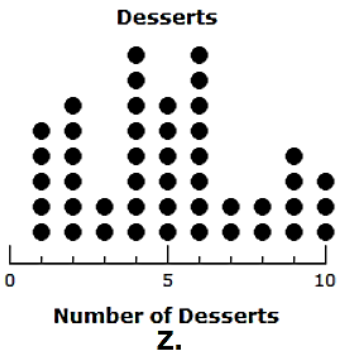


W.

X.



Y.



Z.

- A. W
- B. X
- C. Z
- D. Y

Each of the 20 students in Mr. Arlington's class timed how long it took them to solve a math problem. Their times (in minutes) are listed below:

Student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Time (minutes)	3	5	4	6	4	8	5	4	9	5	3	4	7	5	8	6	3	6	5	7

3 Create a dot plot represent Mr. Arlington’s class data.

MAFS.6.SP.2.4 - FSA PRACTICE

1

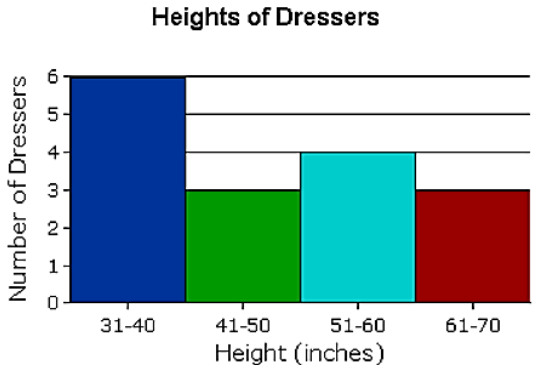
A baby furniture store has a number of different dressers. The table below shows the number of dressers and their heights. Which histogram matches the table?

Height (inches)	31-40	41-50	51-60	61-70
Number of Dressers	6	3	4	3

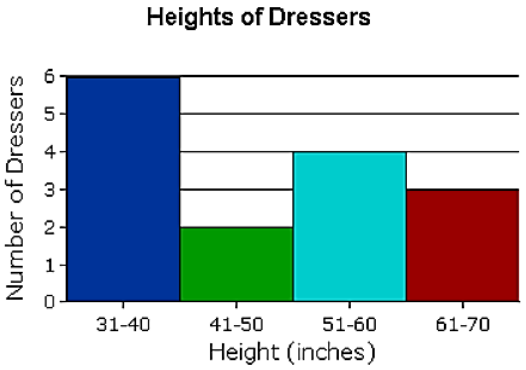
○ A.

○ B.

○ C.



○ D.



2

Data from the International Shark Attack File on the number of shark attacks in Florida is given in the table below.

Shark Attacks in Florida (2001-2013)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of Attacks	34	29	29	12	17	21	31	28	19	14	11	27	23

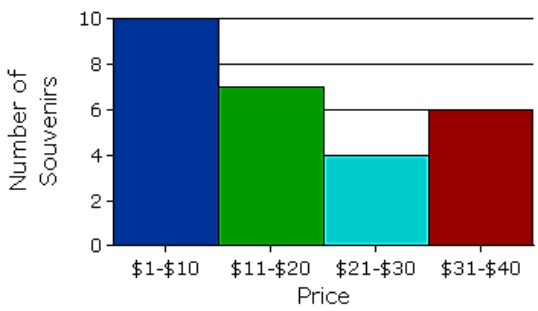
Create a box plot to represent International Shark Attack File's data.

3

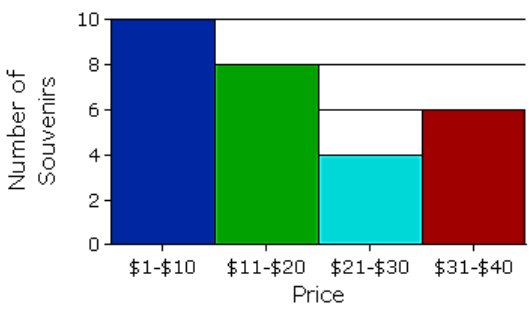
The Disney Store has a number of different souvenirs. The table below shows the number of souvenirs and their price. Which histogram matches the table?

Price	$1-$10	$11-$20	$21-$30	$31-$40
Number of Souvenirs	10	8	4	6

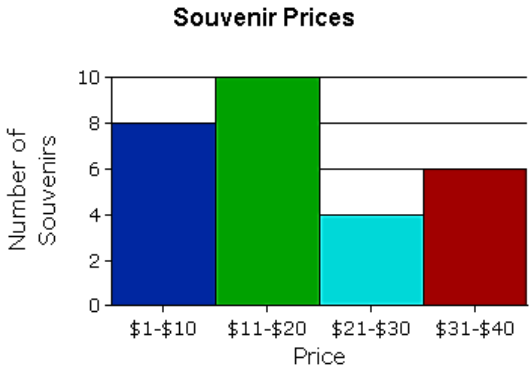
○ A.



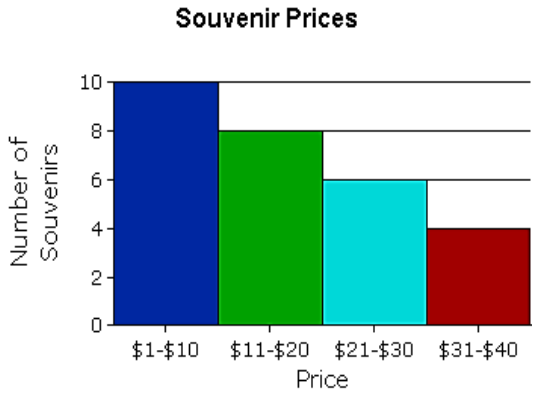
○ B.

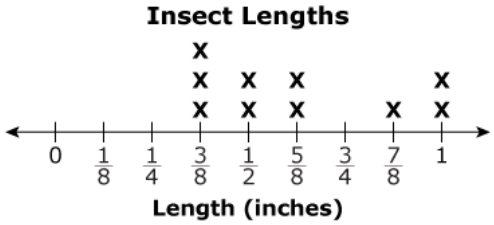
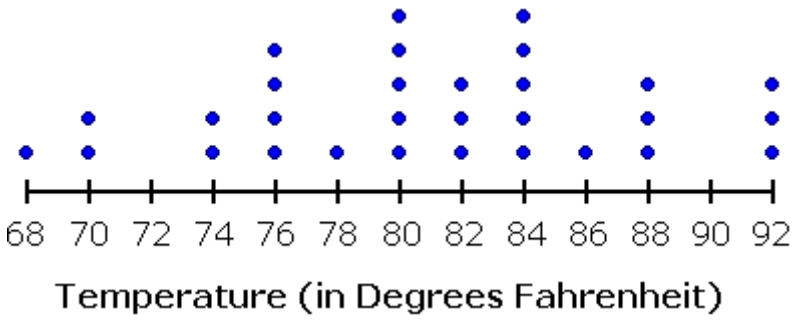


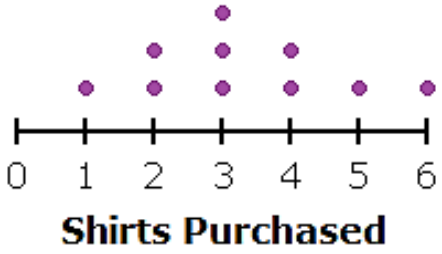
○ C.

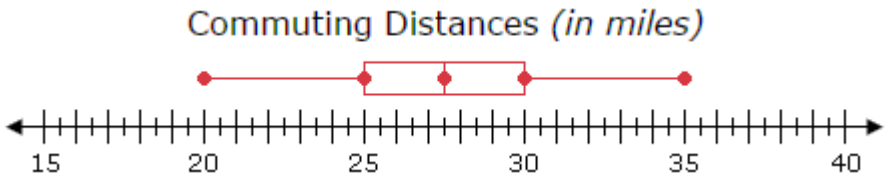
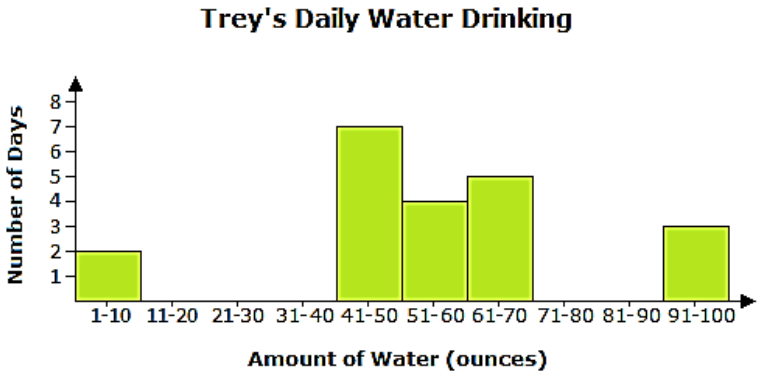


○ D.



	MAFS.6.SP.2.5a, b, c, d
1	The adults of a certain type of insect have a mean length of 0.6 inch. The students in a science class measured 10 insects of this type. The lengths are shown in the line plot.  **Part A** How many of the insects have a length that is greater than 0.6 inch? Enter your answer in the box. **Part B** The mean of the lengths of the insects measured by the science class is Choose... (3/8, 1/2, 5/8, 3/4), which is Choose... (greater, less) than the mean length of adults of that type.
2	The dot plot below shows the number of days with different temperatures last month.  What is the mean of the data set shown? ○ A. 81 ○ B. 2,430 ○ C. 5.13 ○ D. 8

3	The dot plot below shows how many customers purchased different numbers of shirts at a sale last weekend.  What is the interquartile range of the data set shown? ○ A. 6 ○ B. 2 ○ C. 3 ○ D. 5

	MAFS.6.SP.2.5a, b, c, d – FSA PRACTICE
1	 The commuting distances in miles of 10 employees were used to make the box plot shown above. Which of the following is the median of the set of commuting distances? ○ A. 27.5 ○ B. 30 ○ C. 28.5 ○ D. 25
2	The heights in inches of seven basketball players are listed below. 72, 74, 80, 86, 78, 85, 83 What is the interquartile range of the heights? ○ A. 10 ○ B. 81 ○ C. 11 ○ D. 12
3	Trey recorded the number of ounces of water he drank each day in the histogram below.  Which of the following would be the best measure of variability? ○ A. mean absolute deviation ○ B. median ○ C. mean ○ D. interquartile range