

6th Grade Math Common Assessment Answer Key: Chapter 6 (16 Points)

78 Total Points Chapters 6-10

Name: _____ Date _____

6.SP.1

1.) The number of points a basketball player scored each game for one week is recorded. **Which is a not a statistical question for the situation?** (1 point)

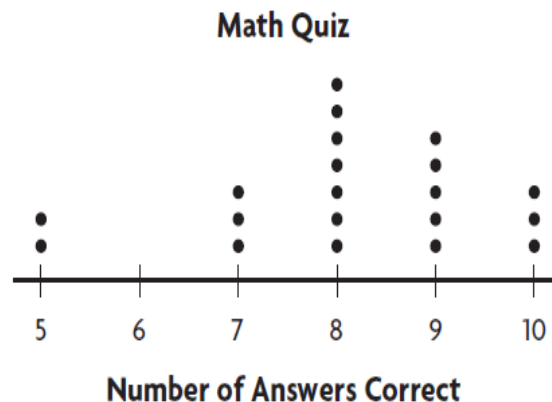
- A. What is the greatest number of points the basketball player scored?
- B. What is the least number of points the basketball player scored?
- C. How many points did the basketball player score in the first game of the week?
- D. How many total points did the basketball player score during the week?

6.SP.2

2.) Mr. Cruz used a dot plot to display the number of questions that each student answered correctly on the math quiz.

Which statement correctly describes the data? (1 point)

- A There is a cluster from 5 to 7.
- B The median of the data is 7.5
- C The mode of the data is 9.
- D There is a gap at 6.



6.SP.3

3.) Cynthia has 5 books with heights of 5 inches, 6 inches, 7 inches, 11 inches, and 11 inches.

- a. Find the range, median, mode, and mean of Cynthia's books.

6 range, 7 median, 11 mode, 8 mean (4 points)

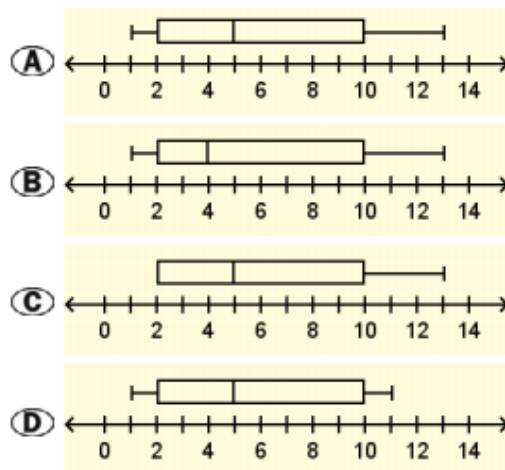
- b. She says that her books are about 8 inches high. Do you agree or disagree with Cynthia's claim? Explain your answer.

Answers will vary (2 points)

6.SP.4

4.) Which box plot correctly displays the data set shown? **A** (1 point)

2, 5, 7, 2, 11, 13, 5, 7, 1, 10, 10, 2, 3, 5, 1, 11

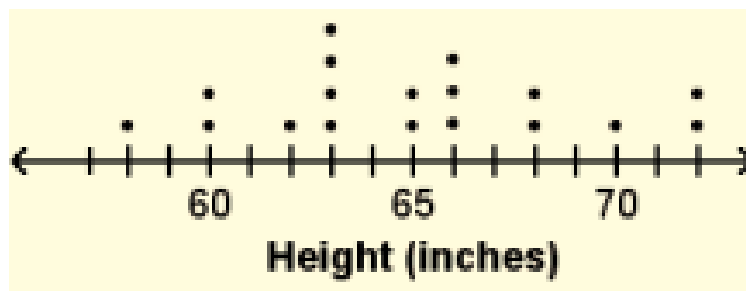


6. SP.5 a.b

5.) Gabby collected the heights, in inches, of her coworkers. This data is shown.

65, 70, 60, 58, 60, 63, 65, 66, 72, 72, 63, 62, 63, 66, 63, 68, 68, 66

a. Construct a dot plot of the data Gabrielle collected. (2 Points)



b. What does each dot in the dot plot represent? (1 Point)

Each dot represents the height, in inches, of one of Gabby's coworkers.

c. Find the height of the tallest and shortest coworker. What are the units of measurements? (1 Point)

The tallest coworker is 72 inches tall and the shortest coworker is 58 inches tall.

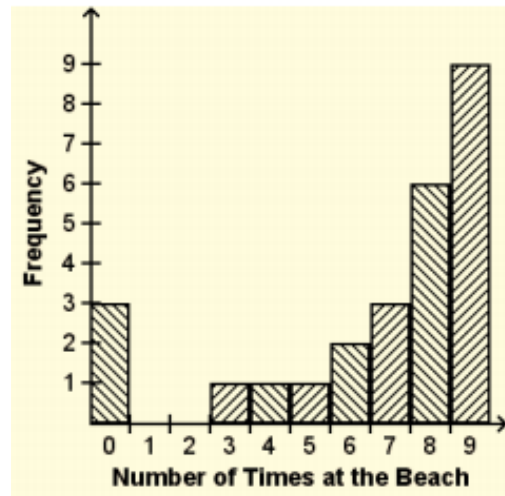
d. Can Gabrielle use a different unit of measurement when collecting her data? Explain. (1 Point)

Yes, Gabby can collect the heights of her coworkers in centimeters.

6. SP.5c

6.) Fred asked each of his classmates how many times they went to the beach over summer break. He displayed the data using the histogram shown. Which statement best describes the pattern of the distribution? (1 point)

- A. Skewed left with one deviation from the overall pattern at the value 0
- B. Skewed left with no deviations from the overall pattern
- C. Skewed right with one deviation from the overall pattern at the value 0
- D. Skewed right with no deviations from the overall pattern



6.SP.5.d

7.) The number of miles Cynthia travels each day is shown. What are the values of the measures of center and variability that best describe the data set? (1 point)

57, 40, 35, 60, 56, 57, 59

- A.) The mean 52 miles and the mean absolute deviation about 8 miles
- B.) The median 57 miles and the interquartile range 19 miles
- C.) The mean 57 miles and the mean absolute deviation 19 miles
- D.) The median 52 miles and the interquartile range about 8 miles

6.SP.6 and 6.SP.7

Are not evaluated on the assessment. Assess within your classroom.

6th Grade Math Common Assessment Answer Key: Chapter 7 (18 Points)

Name: _____ Date _____

6.RP.1

1.) A punch bowl contained 2 liters of 7-UP, 1 liter of orange juice, and 1 liter of raspberry juice. **Select all the true statements.** (4 points)

- A. The ratio of the 7-UP to the entire punch bowl is 1 to 4.
- B. The ratio of orange juice to 7-UP is 2 to 1.
- C. The ratio of the juices to the 7-UP is 2 to 2.
- D. The ratio of the entire punch bowl to the juices is 2 to 4.
- E. The ratio of the orange juice to the raspberry juice is 1 to 1.

6.RP.1

2.) In Ken's meatball recipe, for every 5 cups of bread crumbs, 9 pounds of Ground beef are used. **Write this ratio using a fraction and label the numbers in the fraction.** (1 point)

$$\frac{5 \text{ bread crumbs}}{9 \text{ pounds of ground beef}}$$

6.RP.2

3.) A 5-pound bag of cat food costs \$11.25. **What is the unit price of the cat food in dollars per pound?** (1 point)

- A. \$0.44 per pound
- B. \$2.25 per pound
- C. \$6.25 per pound
- D. \$56.25 per pound

6.RP.2 and 6.RP.3

4.) An online game company offers a package that includes 2 games for \$11.98. They also offer a package that includes 5 games for \$24.95. **Show your work.**

Which package is a better deal? Explain (4 points)

If you buy the package deal for \$11.98 you will pay \$5.99 per online game. If you take the package deal for \$24.95 you will pay \$4.99 per online game. The \$24.95 package is the better deal.

6.RP.3b

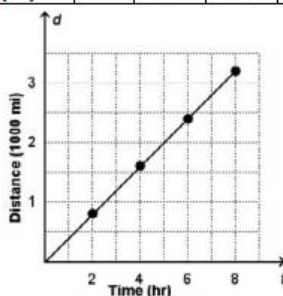
5.) Which of the rates shown here correspond to a unit rate of \$6 per sandwich? (Remember there can more than one answer) (2 points)

- A. Spending \$42 to buy 7 sandwiches
- B. Spending \$108 to buy 18 sandwiches
- C. Spending \$40 to buy 5 sandwiches
- D. Spending \$100 to buy 16 sandwiches
- E. Spending \$42 to buy 6 sandwiches

6.RP.3 a.b. and 6.NS.6b

6.) A plane was traveling at a constant speed and went 32 miles in 8 hours. Make a table of four pairs of distance and time. Then use your table to create a graph of distance versus time. (1 point for each correct ordered pair in the table, 2 points for a correct graph)

Distance (miles)	800	1600	2400	3200
Time (hr)	2	4	6	8



(Students may switch which quantity goes on which axis for full credit, as long as they apply their decision correctly.)

6.RP.3c

7.) A 15% tip on a dinner bill is \$2.55. How much is the dinner bill? (1 point)

A. \$0.17

B. \$0.38

C. \$17.00

D. \$38.25

8.) Write the given decimal as a simplified fraction and percent. (2 points)

a.) 0.057

5.7%

$$\frac{57}{1000}$$

b.) 0.365

36.5%

$$\frac{365}{1000} = \frac{73}{200}$$

6th Grade Math Common Assessment Answer Key: Chapter 8 (15 Points)

Name: _____ Date _____

6.RP.3d

1.) Heather's desk is 3 feet long. About how long is it in meters? (1 point)

Use 1 foot $\approx$ 0.305 meter.

A. 0.00915 meter

B. 0.9015 meter

C. 0.915 meters

D. 9.15 meters

2.) Joan mails a package that weighs 140 grams. About how many ounces is the package? (1 point)

Use 1 ounce $\approx$ 28.4 grams.

A. 0.2 ounce

B. 4.9 ounces

C. 168.4 ounces

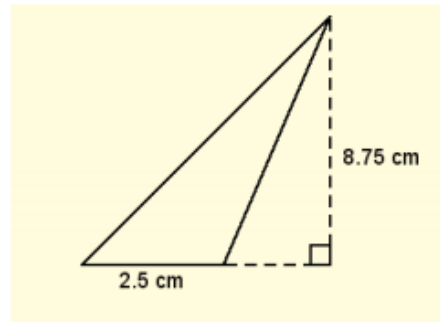
D. 403.3 ounces

6.G.1

3.) What is the area of the triangle in the figure below? (1 point)

Use the formula $A = bh \frac{1}{2}$

$$10.9375 \text{ cm}^2$$



4.) Find the area of the polygon below by dividing it into two rectangles using one vertical line. Show your work. (1 point area, 2 points for reasonable work)

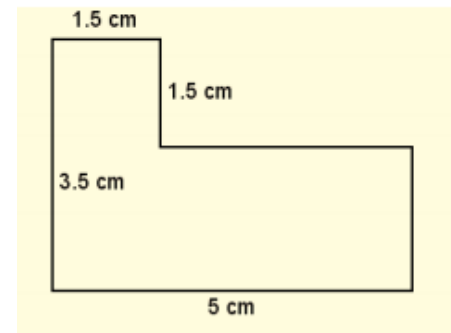
Area of left rectangle:

$$A = (1.5)(3.5) = 5.25 \text{ cm}^2$$

Area of right rectangle:

$$A = (5 - 1.5)(3.5 - 1.5) = (3.5)(2) = 7 \text{ cm}^2$$

$$\text{Total area: } 5.25 \text{ cm}^2 + 7 \text{ cm}^2 = 12.25 \text{ cm}^2$$

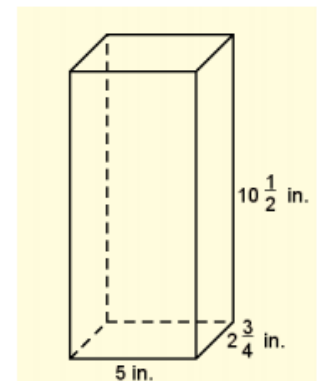


6.G.2

5.) What is the volume of the rectangular prism? (1 point)

Use the formula $V = lwh$

$$144\frac{3}{8} \text{ in}^3$$

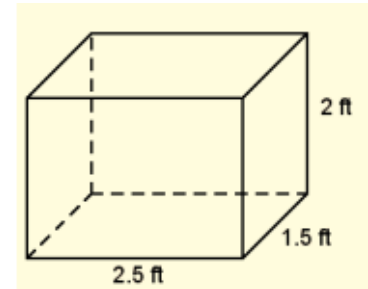
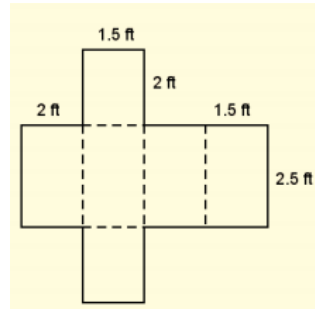


6.G.4

6.) An employee of a store's gift wrapping center is wrapping 8 gifts, each in the same size box. The dimensions of the box are shown below.

a. Draw a net for this box. (1point)

Possible net drawing.



b. Find the surface area of the box. Show your work. (1point surface area, 1 point reasonable work)

The area A of a rectangle is $A = bh$, where b is the base of the rectangle and h is the height. The area of each rectangle with side lengths 1.5 ft and 2 ft is $1.5 \times 2 = 3 \text{ ft}^2$. Since there are two rectangles with these dimensions, the combined area is $2 \times 3 = 6 \text{ ft}^2$. The area of each rectangle with side lengths 1.5 ft and 2.5 ft is $1.5 \times 2.5 = 3.75 \text{ ft}^2$. The area of each rectangle with side lengths 2 ft and 2.5 ft is $2 \times 2.5 = 5 \text{ ft}^2$. Since there are two rectangles of each type, the combined area is $2 \times 3.75 + 2 \times 5 = 17.5 \text{ ft}^2$. So, the total surface area of the box is $6 \text{ ft}^2 + 17.5 \text{ ft}^2 = 23.5 \text{ ft}^2$

c. If there is only 160 square feet of wrapping paper left, will the employee be able to wrap all of the gifts? Explain. (1 point for answer, 1 point for explanation)

The employee needs to wrap 8 boxes, each with a surface area of 23.5 ft^2 . So, the combined surface area needing to be wrapped is $8 \times 23.5 = 188 \text{ ft}^2$. Since there is only 160 square feet of wrapping paper left, the employee will not be able to wrap all of the gifts.

6.G.5 Teachers this is a local standard added to the pacing guide. You will need to supplement.

7.) One circle has a 96 cm diameter and another circle has a 295.16 cm circumference. Which circle has a larger radius? Explain using 3.14 for π . (1 point for answer, 2 points for explanation)

The circle with the 96 cm diameter has a larger radius. The circle with a 96 cm diameter has a $96 \div 2 = 48$ cm radius. Use the formula for the circumference of a circle to find the radius of the circle that has a 295.16 cm circumference.

$$C = 2\pi r$$

$$295.16 = 2\pi r$$

$$295.16 \approx 2 \cdot 3.14 \cdot r$$

$$295.16 \approx 6.28 \cdot r$$

$$295.16$$

$$6.28 \approx 6.28r$$

$$6.28$$

$$47 \approx r$$

The radius of this circle is about 47 cm. So, the circle with the 48cm radius is the bigger circle.

6th Grade Math Common Assessment Answer Key: Chapter 9 (15 Points)

Name: _____ Date _____

6.NS.5

1.) Which of the following are most likely to be represented by -8? **Circle all that apply.** (1 point)

- a. Temperature drop of -8°F
- b. A depth of 8 meters
- c. A growth of 8 centimeters
- d. A time 8 years ago

6.NS.6

2.) Create a number line and graph -5 , 0 , 2 , and 4 . Then, graph their opposites on the same number line. (1 point)

The following should be graphed on the line: -5 , -4 , -2 , 0 , 2 , 4 , 5

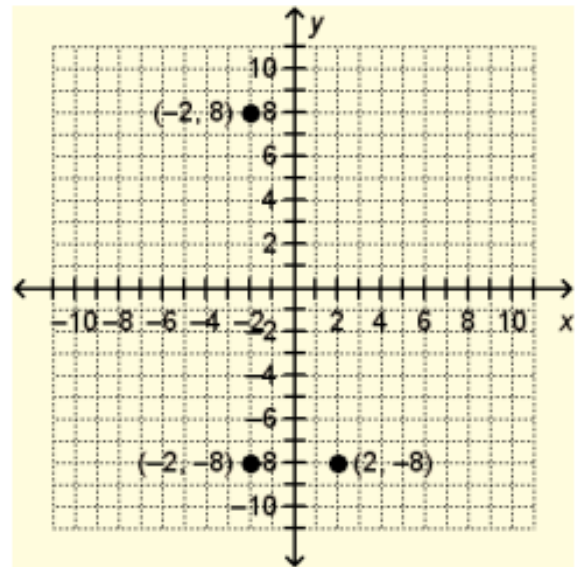
<----->

6.NS.6

3a.) Graph and label the point $(-2, 8)$.

(1 point graphed and labeled correctly)

3b.) Find the point that represents a reflection of $(-2, 8)$ across the x-axis. Graph and label the result. (1 point for coordinates $(-2, -8)$, 1 point for graphed)



3c.) Find the point that represents a reflection of the result from part b across the y-axis. Graph and label the result. (1 point for coordinates $(2, -8)$ and 1 point for graphed and labeled correctly)

6.NS.7a

4.) A number x is to the left of 10.2 on a number line. Which inequality describes this situation?

A. $x > 10.2$

B. $x < 10.2$

C. $-10.2 < x$

D. $x < -10.2$

6.NS.7b

5.) Marlene is about to write a check for \$103.48 to pay for groceries. When she subtracts the amount of the check from her account balance, she sees that the new balance would be $-\$28.80$. Rather than overdraw her checking account, Marlene asks the cashier to remove some items. For Marlene to be able to pay by check without overdrawing her account, what is the minimum value of the items the cashier must remove?

- A. $-\$103.48$
- B. $-\$28.80$
- C. $\$28.80$
- D. $\$103.48$

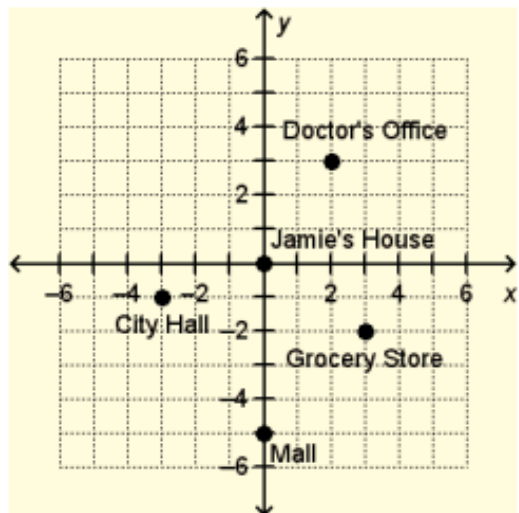
6.NS.7c

6.) How do the numbers -3 and 2 compare? How do their absolute values compare?

- A. -3 is greater than 2 , but 2 has the greater absolute value.
- B. 2 is greater than -3 , but -3 has the greater absolute value.
- C. -3 is greater than 2 , and -3 has the greater absolute value.
- D. 2 is greater than -3 , and 2 has the greater absolute value.

6.NS.8

7.) Jamie's house is in the center of town, at point $(0, 0)$. He is doing some errands in town and stops at the other four labeled points on the coordinate plane. One unit on the coordinate plane represents 1 block. He travels 4 blocks to his first stop. His second stop is 7 blocks from his first stop. He can only travel on the sidewalks, which are represented by the grid lines.



a. Where did Jamie go first? List all possible answers. Justify your answers. (1 point for answer, 1 point for explanation)

Jamie went to city hall first. The distance between Jamie's house and city hall is 4 blocks. The distance between Jamie's house and the grocery store is 5 blocks. The distance between Jamie's house and the mall is 5 blocks. The distance between Jamie's house and the doctor's office is 5 blocks. City hall is the only location that is 4 blocks away.

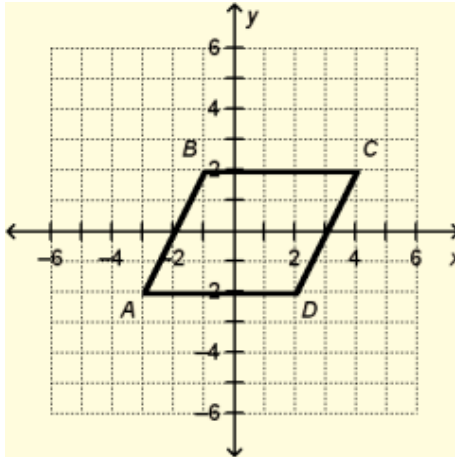
b. Where did Jamie go second? List all possible answers. Justify your answers. (1 point for answer, 1 point for explanation)

Jamie went to either the mall or the grocery store second. The distance between city hall and the mall is 7 blocks. The distance between city hall and the grocery store is 7 blocks. The distance between city hall and the doctor's office is 9 blocks. The mall and the grocery store are both 7 blocks away. The mall and the grocery store are the only possible second stops.

6.G.3

8. Graph the shape that has vertices $A(-3, -2)$, $B(-1, 2)$, $C(4, 2)$, and $D(2, -2)$.

(1 point for the graph, 1 point for identifying the shape)



What kind of shape is it? **parallelogram**

6th Grade Math Common Assessment Answer Key: Chapter 10 (14 Points)

Name: _____ Date _____

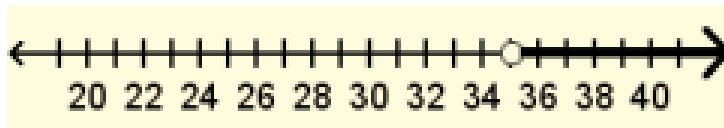
6.EE.8

1.) Savannah's daily commute from home to work is more than 35 miles each way.

a. Write an inequality that represents this situation.

The inequality $d > 35$, where d is the number of miles Savannah commutes to work, represents the situation.

b. Graph the solutions of the inequality from part a.



2.) All of the students in a class are older than 10 years. What inequality represents the ages x of the students?

A. $x < 10$

B. $x \leq 10$

C. $x > 10$

D. $x \geq 10$

6.EE.9

3.) The table below shows the balance of a savings account after t weeks, where money is being withdrawn at a constant rate. Peter can find the balance of the account based on how many weeks have passed. **What are the independent and dependent variables, and how do they change?**

Time (weeks), t	Balance (dollars), b
0	850
1	800
2	750
3	700

- A. As the independent variable t increases by 1, the dependent variable b increases by 50.
- B. As the independent variable t increases by 1, the dependent variable b decreases by 50.**
- C. As the independent variable b increases by 1, the dependent variable t increases by 50.
- D. As the independent variable b increases by 1, the dependent variable t decreases by 50.

6.EE.9

4.) Gloria is an artist. She sets a goal to paint 2 pieces every month. She has already painted 5 pieces. The number of pieces Gloria paints depends on the number of months she spends painting. **Which statements describe the number of pieces p Gloria paints over t months if she meets her goal? Select all correct answers.**

- A. p is the independent variable and t is the dependent variable.
- B. t is the independent variable and p is the dependent variable.**
- C. p increases by 2 as t increases by 1.**
- D. t increases by 2 as p increases by 1.
- E. The equation representing the situation is $p = 2t + 5$.**

6.EE.9 and 6.RP.3

5.) The table below shows the number of words w a person types after t minutes. The number of words typed per minute is a constant 52.

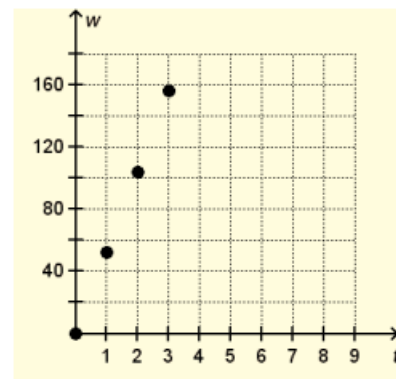
Time (minutes), t	Number of words, w
0	0
1	52
2	104
3	156

- a. The number of words typed is determined by how many minutes the person spends typing. What are the independent and dependent variables?

Independent Variable: t

Dependent Variable: w

- b. Graph the values from the table.



- c. Write an algebraic expression that represents the situation.

$$w = 52t$$