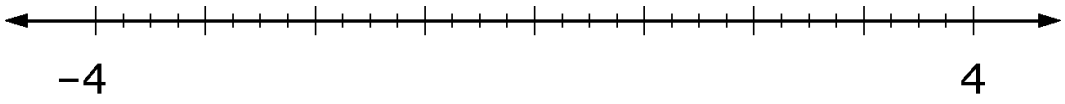
Name _____ Period _____ Date _____

Grade 6 Unit 4 Model Curriculum Assessment

1. Plot each of the following six numbers on the number line below, and label each point with the corresponding number.

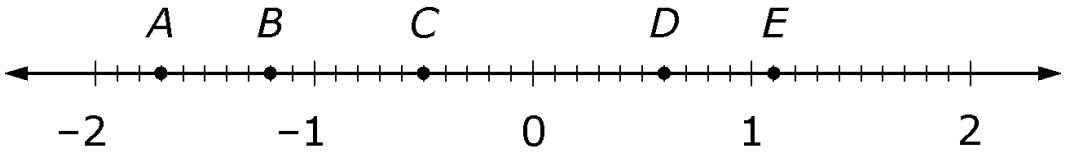
$$3,\ \frac{1}{2},\ -2,\ 0,\ -3\frac{1}{4},\ 2$$



2. Brendan says that the negative of $-\frac{1}{3}$ is 3 because they are on opposite sides of zero when they are plotted on the number line.

   Is Brendan correct? Explain your answer.

3. In the table below, write the number that corresponds to each point on the number line shown.



Point	Number
A	
B	
C	
D	
E	

4. Compare each of the following pairs of rational numbers by filling in the blank with $<$ or $>$.

$5 \_\_\_\_\_ -10$ $\qquad$ $-42.89 \_\_\_\_\_ -51.52$

$-4\frac{7}{8} \_\_\_\_\_ -4\frac{2}{3}$ $\qquad$ $\frac{15}{4} \_\_\_\_\_ \frac{24}{7}$

5. The numbers -6, -6.8, and $-6\frac{1}{5}$ are located on a number line. Complete each of the following sentences

by filling in the blank with the word **left** or **right**.

-6 is to the _____ of -6.8 on the number line.

-6.8 is to the _____ of $-6\frac{1}{5}$ on the number line.

-6 is to the _____ of $-6\frac{1}{5}$ on the number line.

6. The Valdés Peninsula in the country of Argentina has an elevation of

-131 feet. Death Valley in California has an elevation of -282 feet. Is the elevation of Death Valley lower than the elevation of the Valdés

Peninsula? Explain your answer.

7. Indicate whether each of the following inequalities is correct or incorrect by checking the appropriate box in the table below.

Inequality	Correct	Incorrect
$-46 > -38$		
$-\frac{4}{5} < -\frac{1}{2}$		

$-21 > -21\frac{1}{3}$		

8. Christopher uses $\frac{2}{3}$ cup of ice cream to make a root beer float, Sean uses $\frac{7}{12}$ cup of ice cream, and Jennifer uses $\frac{5}{8}$ cup of ice cream.

Which of the following correctly compares the three amounts of ice cream?

a. $\frac{2}{3} > \frac{7}{12} > \frac{5}{8}$

b. $\frac{2}{3} > \frac{5}{8} > \frac{7}{12}$

c. $\frac{7}{12} > \frac{5}{8} > \frac{2}{3}$

d. $\frac{7}{12} > \frac{2}{3} > \frac{5}{8}$

9. Which of the statements is true?

a. When the point $(-15.9, 32.8)$ is reflected over the *x*-axis, the image is the point $(-15.9, -32.8)$.

b. When the point $(-15.9, 32.8)$ is reflected over the *y*-axis, the image is the point $(-15.9, -32.8)$.

c. When the point $(-15.9, 32.8)$ is reflected over the *x*-axis and then the *y*-axis, the image is the point $(-15.9, -32.8)$.

d. When the point $(-15.9, 32.8)$ is reflected over the *y*-axis and then the *x*-axis, the image is the point $(-15.9, -32.8)$.

10. In the coordinate plane, the coordinates of point A are $\left(6\frac{5}{8}, -4\right)$. Point A is reflected over the y-axis to point B. What are the coordinates of point B ?

a. $\left(6\frac{5}{8}, 4\right)$

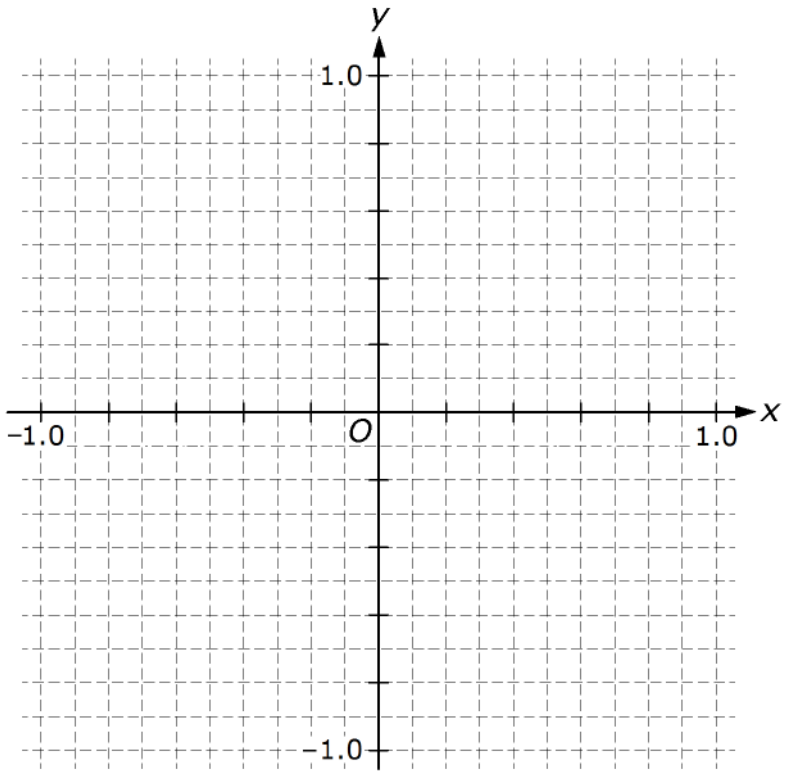
b. $\left(4, 6\frac{5}{8}\right)$

c. $\left(-4, -6\frac{5}{8}\right)$

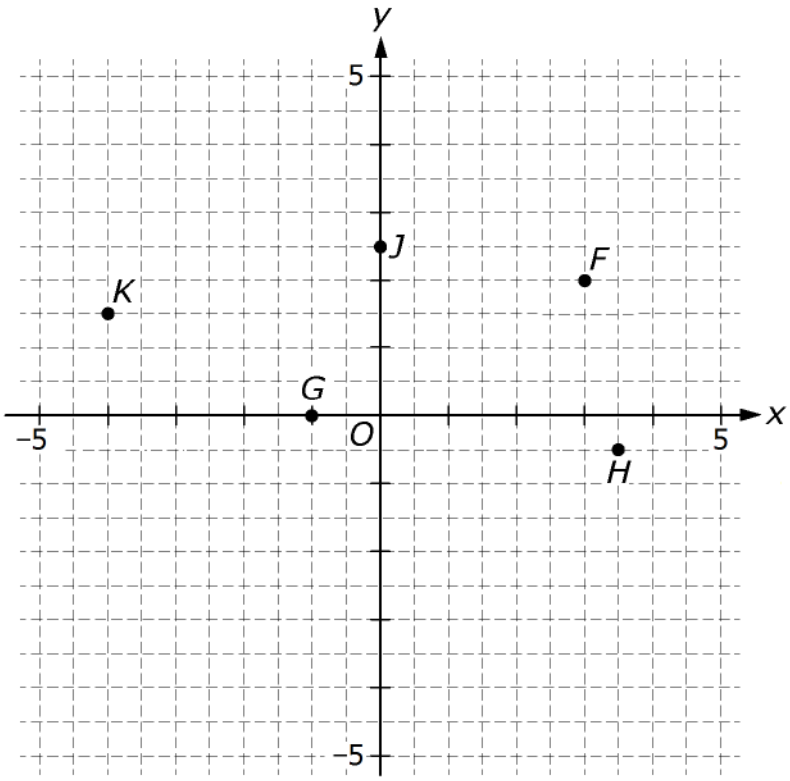
d. $\left(-6\frac{5}{8}, -4\right)$

11. Plot each of the following five points on the coordinate plane below, and label each point with the corresponding letter.

$A(0.2, 0.5)$, $B(-0.3, 0.1)$, $C(0, -0.4)$, $D(-0.8, -0.6)$, $E(0.7, 0)$


y
1.0
x
−1.0
O
1.0
−1.0

12. Five points are plotted in the coordinate plane shown. In the table below, write the coordinates that correspond to each point.



Point	Coordinates
F	
G	
H	
J	
K	

13. Ms. Ruiz asked the students in her class how they would use reflections to describe how the points $(2, 3)$ and $(-2, -3)$ in the coordinate plane are related. Aaliyah said that she would reflect $(2, 3)$ over the *y*-axis first and then reflect that point over the *x*-axis to get to $(-2, -3)$. Yusuf said that he would reflect $(2, 3)$ over the *x*-axis first and then reflect that point over the *y*-axis to get to $(-2, -3)$. Circle neither name, one name, or both names below to show who is correct, and then explain your choice.

Aaliyah Yusuf

14. The table below shows the ending October balances of the accounts of four students. Which student owes the **least** amount of money?

Adult	Balance
Dylan	- $19.25
Elise	- $42.75
Francesca	- $23.00
Jamaal	- $35.50

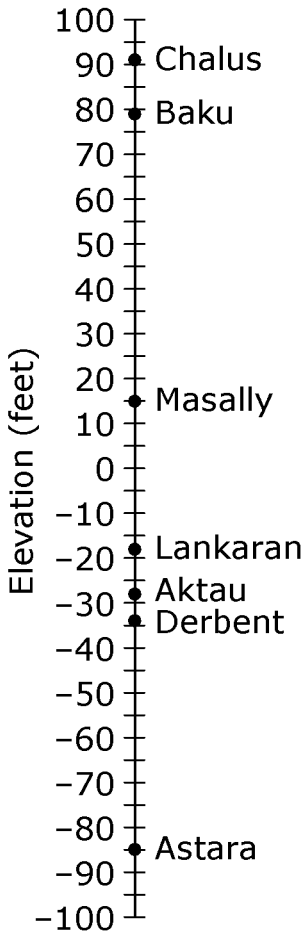
a. Dylan
b. Elise
c. Francesca

d. Jamaal

15. The table below shows the goals for, goals against, and the resulting goal difference for seven Italian soccer teams at the end of the 2011—2012 season. AC Siena's goal distance fell equally between which two teams' goal differences? Explain your answer.
(Note: Goal Difference = Goals For - Goals Against)

Team	Goals For	Goals Against	Goal Difference
Juventus	68	20	48
AC Milan	74	33	41
AS Roma	60	54	6
AC Siena	45	45	0
Fiorentina	37	43	- 6
Palermo	52	62	- 10
AC Cesena	24	60	- 36

16. The number line below represents the elevation, in feet, of seven cities around the Caspian Sea in Asia. The elevation at sea level is 0 feet. Which of these cities have an elevation that is more than 75 feet away from sea level?



17. Sara plotted the locations of the trees in a park on a coordinate grid. She plotted an oak tree, which was in the middle of the park, at the origin. She plotted a maple tree, which was 10 yards away from the oak tree, at the point $(10, 0)$. Then she plotted a pine tree at the point $(-2.4, 5)$ and an apple tree at the point $(7.8, 5)$. What is the distance, in yards, between the pine tree and the apple tree in the park? Each grid unit is equal to one yard.

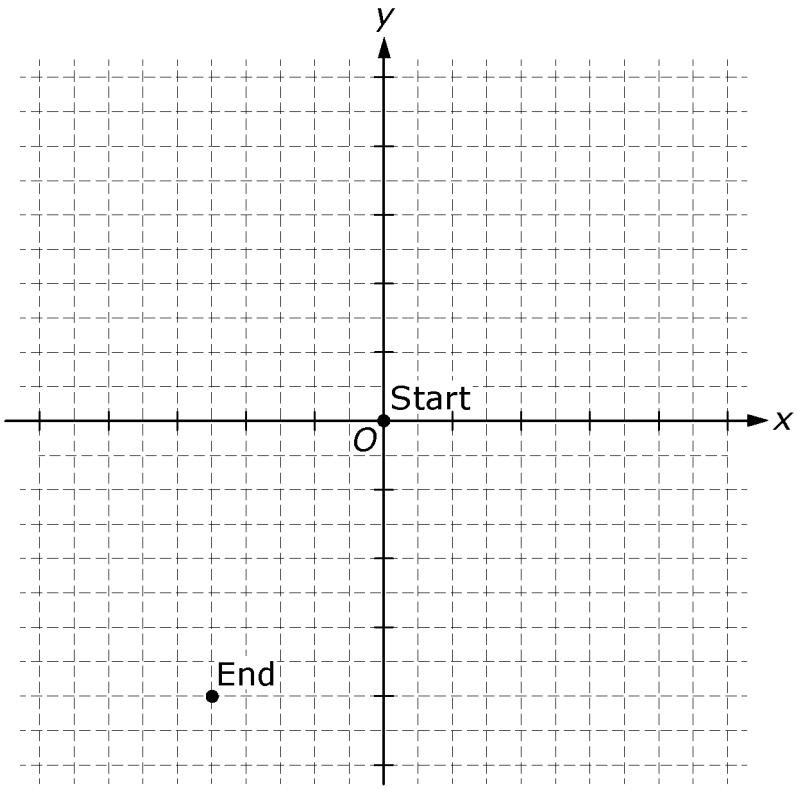
a. 2.2
b. 5.4
c. 9.4
d. 10.2

18. The streets in the city of Benton are laid out like a coordinate grid. The middle school is located at the point $(-2, -3)$. The library is located 8 blocks away from the middle school. Indicate whether each coordinate pair could represent the location of the library by checking the appropriate box in the table. Each grid unit is equal to one block.

Coordinate Pair	Could Represent the Location of the Library	Could **NOT** Represent the Location of the Library
$(-2, 11)$		
$(-2, -11)$		

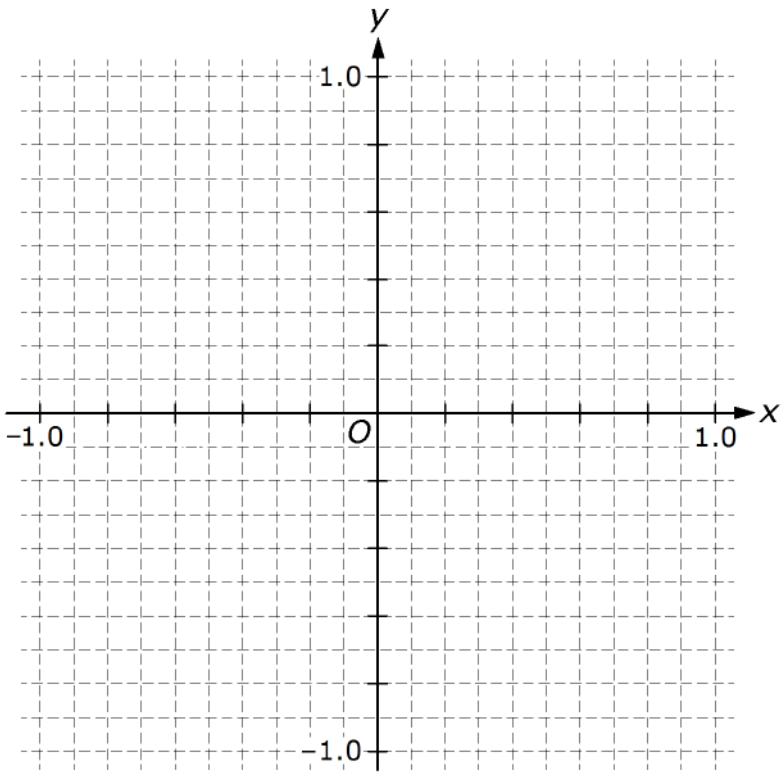
$(6, -3)$		
$(-10, -3)$		

19. In Mathville, the streets are laid out like a coordinate grid, and the distance from one intersection to the next on the same street is always 120 meters. Ada walked from the intersection of 0^{th} Avenue and 0^{th} Road to meet a friend at the intersection of -5^{th} Avenue and -8^{th} Road, as shown on the coordinate plane. She only walked along the streets. What is the distance, in meters, of the shortest route Ada could have taken walking along the streets? Explain your answer.



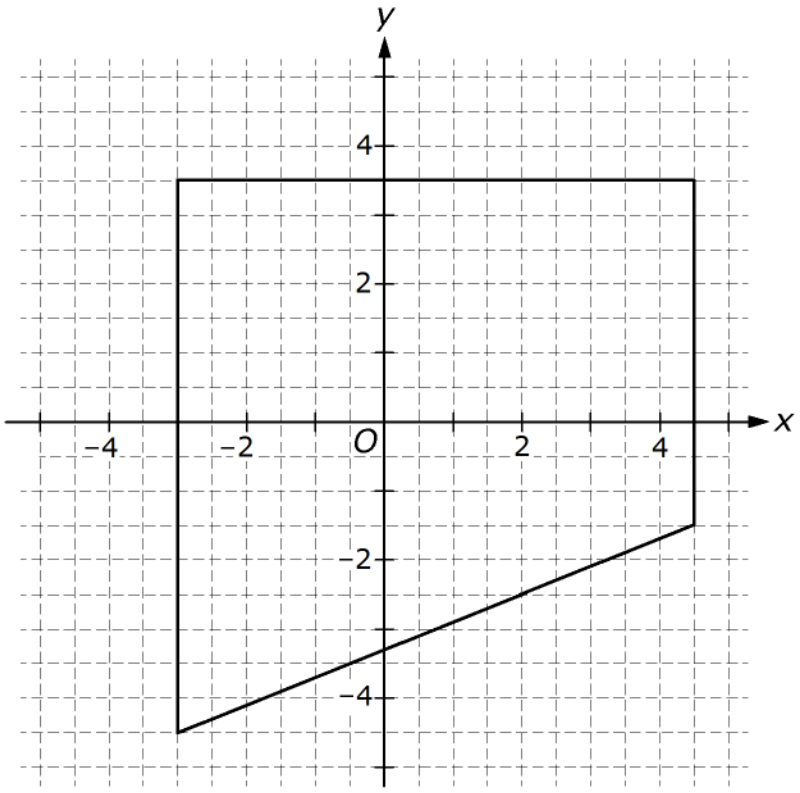
20. Keith and Reggie live in the city of Hainesville, which is laid out like a coordinate grid. Keith's house is located at the point $(0.4, -0.9)$, and Reggie's house is located at the point $(0.4, 0.5)$.

Part A: Plot and label Keith's house and Reggie's house on the coordinate plane shown.

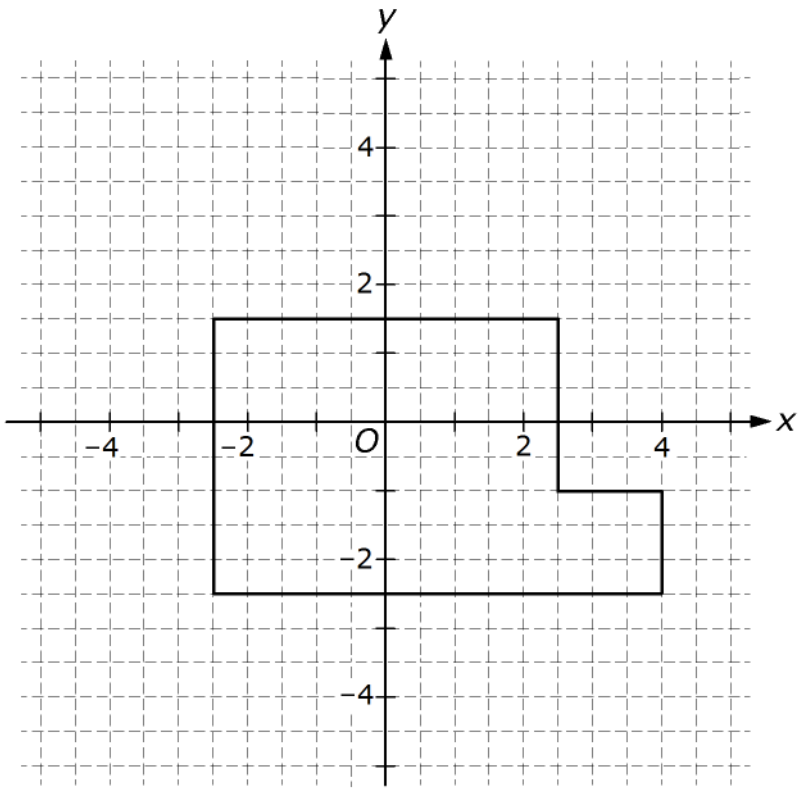


Part B: A basketball court is located halfway between Keith's house and Reggie's house. Plot and label the basketball court on the coordinate plane shown.

21. Kylie fenced off part of her barnyard to keep her chickens safe. The part of the barnyard that she fenced off is represented on the coordinate plane below, where the units are in feet. What is the area, in square feet, of the part of the barnyard that she fenced off? Explain how you found your answer.

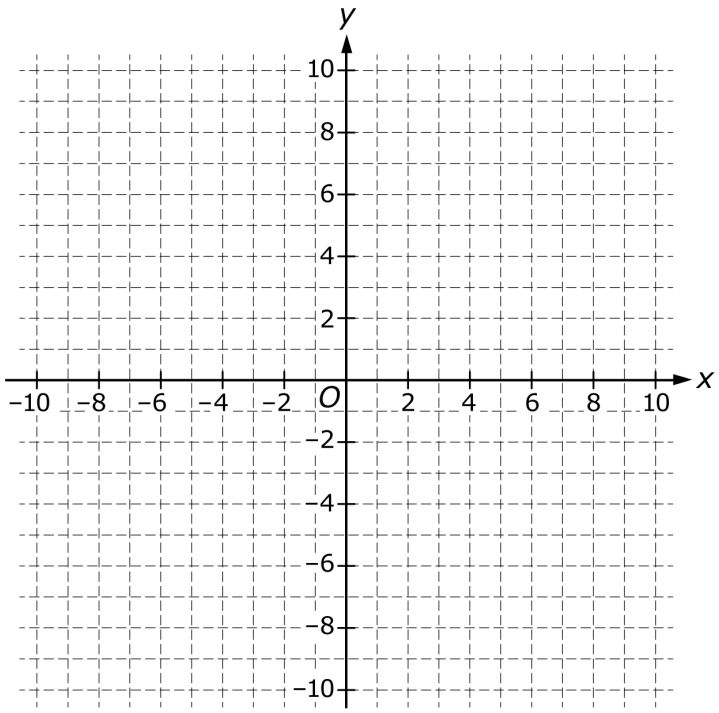


22. The design for a playground is represented on the coordinate plane below, where the units are in yards. A fence will be built around the perimeter of the entire playground. How many yards of fencing will be needed to build the fence?

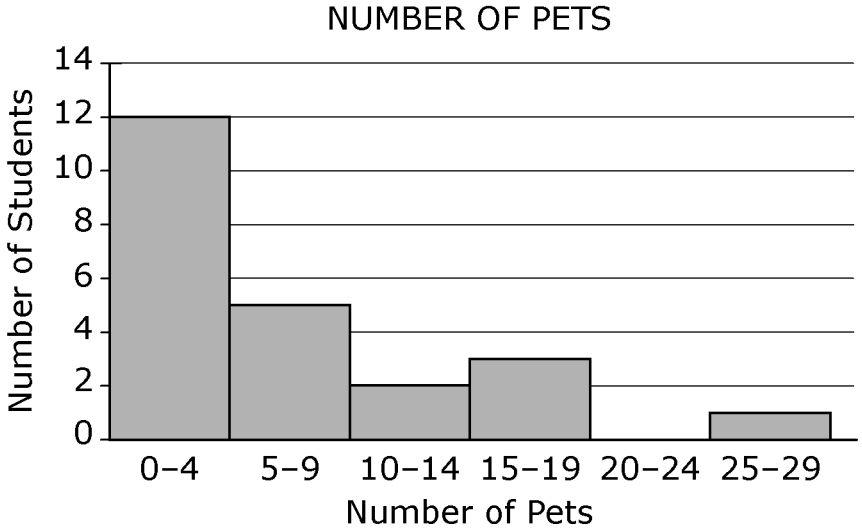


a. 21.0
b. 22.5
c. 24.0
d. 25.5

23. The town of Windsor wants to build a children's pool. The surface of the pool must be a rectangle that has an area of 144 square feet. The coordinate plane below represents the space available for the pool, where the units are in feet. Draw one design for the pool on the coordinate plane below.



24. All the students in Ms. Carter's class reported the number of pets they have at home. Ms. Carter created the histogram shown based on the data she collected.



Part A: How many students are in Ms. Carter's class?

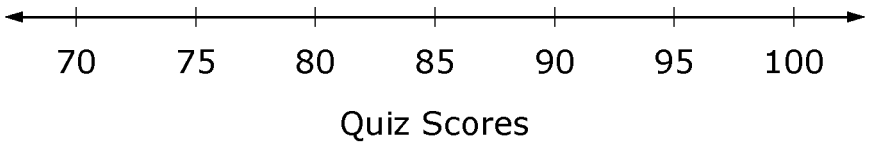
Part B: On the histogram, what is the meaning of the tallest bar, in terms of the situation?

Part C: On the histogram, why is there an interval with no bar on it?

25. Mr. Williams gave the 24 students in his class a quiz. The students' scores on the quiz are shown below.

90	80	90	95	95	90	90	80
90	100	85	70	100	100	75	70
85	85	85	85	85	80	95	100

Create a dot plot of the data shown.



Quiz Scores

26. The 21 students in Ms. Sharpe's class had a contest to see how many words of the Gettysburg Address each student could type in one minute. The number of words typed by the students in the class is shown below.

10	11	13	14	15	15	16
18	19	20	21	22	23	25
26	28	28	33	35	38	41

Part A: Fill in the blanks to identify each of the following values based on the data.

Minimum _____

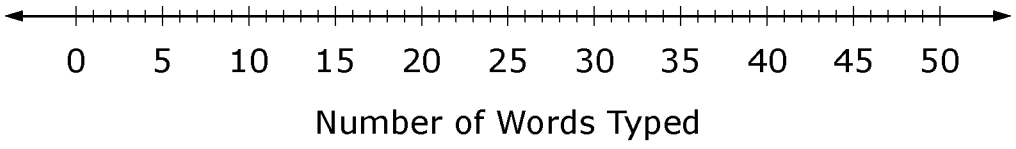
First quartile _____

Second quartile _____

Third quartile _____

Maximum _____

Part B: Create a box plot of the data.



27. There are 20 students in a book club. The number of books each student has read in the last year is shown below.

10	13	12	18	15	13	25	15	28	22
18	27	17	19	22	29	24	11	15	15

Part A: Complete the frequency table using the data shown.

Number of Books Read	Tallies	Frequency
10–13		
14–17		
18–21		
22–25		
26–29		

Part B: Create a histogram of the data in the frequency table. Be sure to include appropriate labels on the histogram.