TEST NAME: **Math Gr 6 FAIM 2016 Form 2-B**
TEST ID: **1549472**
GRADE: **Sixth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **State Interim Assessment**

08/01/16, Math Gr 6 FAIM 2016 Form 2-B

Student:

Class:

Date:

Instructions

Use your Response Document to answer question 22.

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1. What is the value of $5x^2y - \frac{7x}{y}$ when $x = 4$ and $y = 2$?

   A. 17.5

   B. 76.5

   C. 146

   D. 786

2. Which of these is a statistical question?

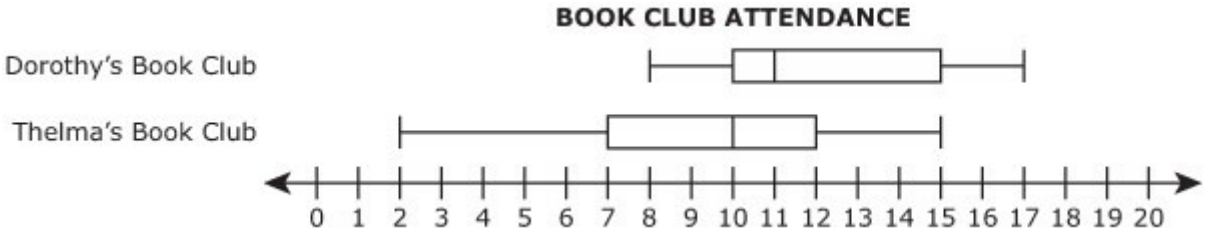
   A. What time does the movie end?

   B. What is the highest score in the last math test?

   C. How many students in a class went on the field trip?

   D. How many hours per week do sixth graders spend on their homework?

3. Dorothy and Thelma both host book clubs. The box-and-whisker plots represent the attendance of their book clubs. The scale represents the number of people in attendance.



Based on the graphs, which statement about the book clubs is true?

A. The attendance at Thelma's book club varies more because the difference between its first quartile and its maximum attendance is greater than that of Dorothy's book club.

B. The attendance at Dorothy's book club varies more because the difference between its median and maximum attendance is greater than that of Thelma's book club.

C. The attendance at Thelma's book club varies more because its range is greater than the range of attendance at Dorothy's book club.

D. The attendance varies the same amount at both book clubs because the interquartile range of both book clubs is the same.

4. Steve has 18 blue marbles and 27 red marbles in a bag. What is the ratio of red marbles to blue marbles?

5. Which expression is equivalent to y^4?

A. $4 \cdot y$

B. $y \cdot y^3$

C. $3y + y$

D. $y^2 + y^2$

6. It took Sergio 2 hours to read 5 chapters of a book. If he continues reading at a constant rate and the chapters are similar in length, how many hours will it take Sergio to complete the entire book if it is 16 chapters long?

7. Elevation is a measure of height in relation to sea level. The highest feature on Earth is Mount Everest with an elevation +29,029 feet. The lowest feature on Earth is the Challenger Deep with an elevation -35,797 feet.

   Part A. What elevation does sea level represent in this scenario?

   Part B. Which feature is farther from sea level?

   Part C. What elevation is halfway between these two features? Show or explain how you got your answer.

8. John determined that his car uses 15 gallons of gas every 350 miles. At this rate, how much gas will be used traveling 147 miles?

9. Ricky is building a fence around his garden. The perimeter of Ricky's garden is 39 meters. The fencing is sold in 8-foot sections. If 1 foot ≈ 0.305 meter, how many 8-foot sections of fencing does Ricky need to put around his garden?

   A. 12 sections

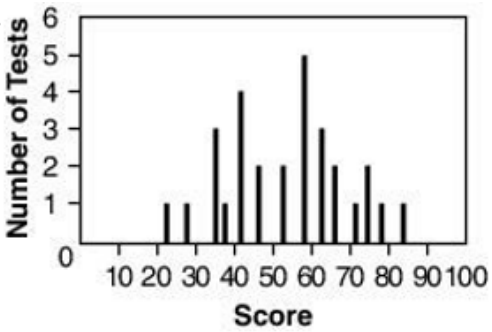
   B. 15 sections

   C. 16 sections

   D. 25 sections

10. For which data set would the median be a better measure of center than the mean?

A.



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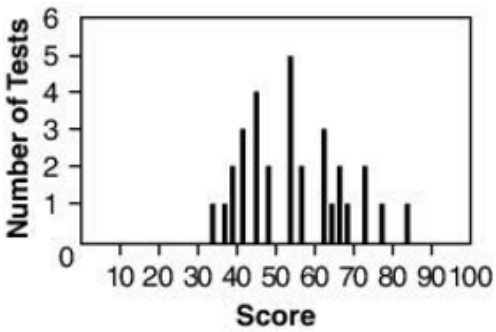

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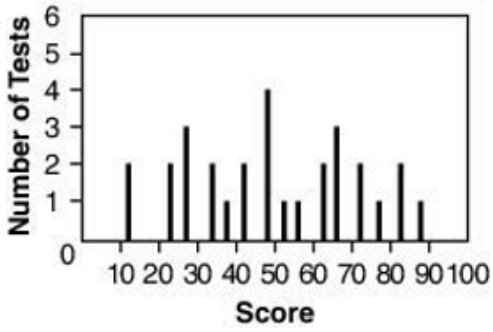

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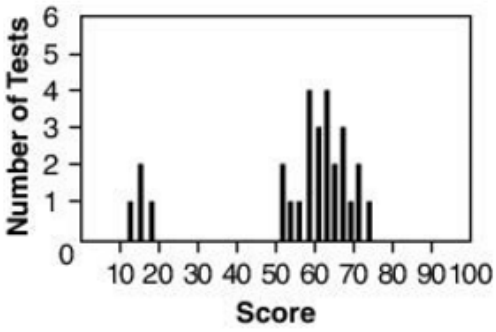
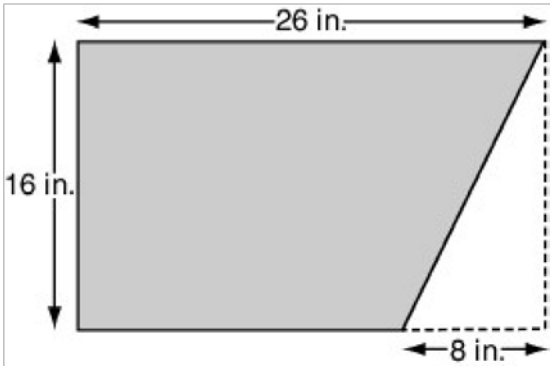


11. A carpenter cut a triangular wooden piece from a rectangular wooden board as shown.



What was the area, in square inches, of the wooden board after the triangular piece was removed?

12. John has 3 dollars more than Amanda. If Amanda has $2m$ dollars, how much money does John have?

13. The River Raft Company rents canoes and kayaks. Its rates are shown in the table below.

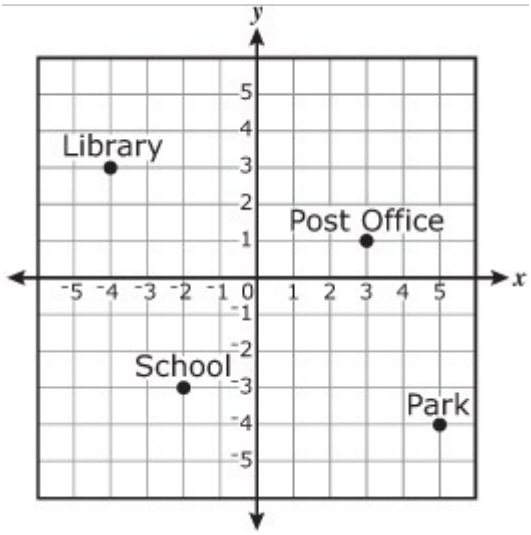
RIVER RAFT COMPANY CANOE AND KAYAK RENTAL RATES

Item	Cost
Canoe	$12 plus $4 per hour
Kayak	$8 plus $3 per hour

Part A. Write an expression that can be used to determine the total cost of renting a canoe for *h* hours.

Part B. Next door to the River Raft Company is the Cascade Hotel. The cost for a room for one night is determined by the expression, $75 + 25g$, where *g* is the number of guests staying in the room. Calculate the cost for a room for one night with 3 guests.

14. The coordinate grid below shows the locations of three buildings and the park in a town.



What is the *y*-coordinate of the ordered pair that identifies the location of the library?

15. Two sets of test scores are shown below.

Set A: 66 66 72 73 75 79 80 81 81 88 89 92

Set B: 62 72 72 73 78 78 79 81 85 86 90 91

Which statement correctly compares the median and interquartile range for these sets?

A. Set A has a greater median and a smaller interquartile range.

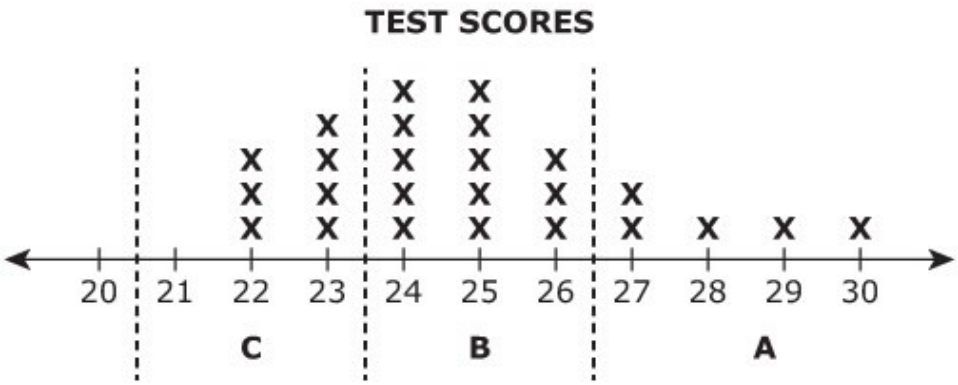
B. Set A has the same median and a greater interquartile range.

C. Set A has the same median and a smaller interquartile range.

D. Set A has a smaller median and a smaller interquartile range.

16. Daniel is saving money to go to a summer camp. He had $43.25 and then added all of his allowance for the month. He has $60.25 after adding in his allowance. Write an equation to determine how much allowance, *x*, Daniel received.

17. The test scores for a group of students are represented on the line plot. The grades earned for each score are shown below the line plot.



Which statement about the distribution of the scores is true?

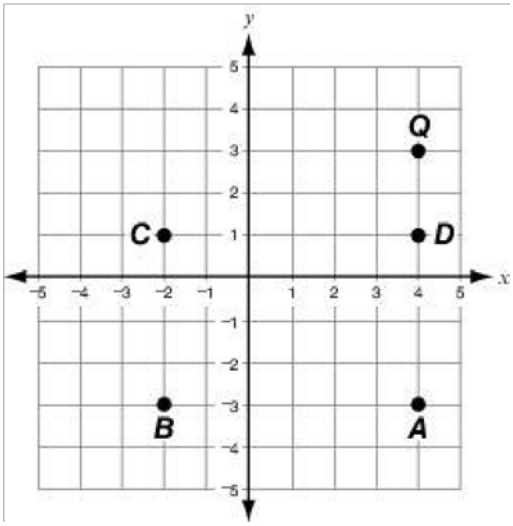
A. The distribution has a longer tail for the scores that are less than the center.

B. The distribution is symmetric about its center because most students earned a grade of B.

C. The distribution shows the value of the mean, the mode, and the median are all the same.

D. The distribution is narrow because most scores are close to the center, but scores greater than 27 increase the overall spread.

18. Jenna had a busy day after school. First, she walked from home (point *Q*) to the store (point *A*). Then, she left the store and walked to the library (point *B*) to check out a book. After leaving the library, Jenna walked to school (point *C*). Jenna then left school and walked to her friend Marie's house (point *D*). After her visit with Marie, Jenna returned home (point *Q*) to have dinner. These locations are shown on the coordinate plane below.



If Jenna walked in straight lines in the order given, what is the total distance, in units, she walked after school?

19. Which situation has a unit rate of 4?

A. A runner ran 4 miles in 30 minutes.

B. The cost of 4 rides at the carnival was $8.

C. The 2 packages weighed a total of 2 pounds.

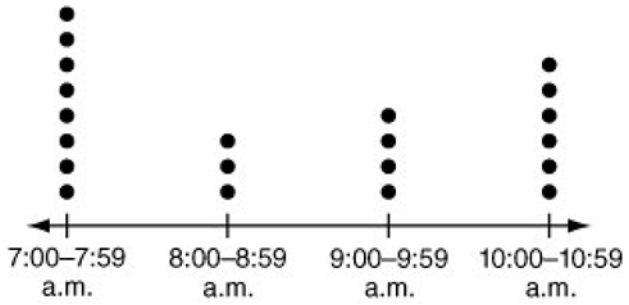
D. A gardener harvested 20 tomatoes from 5 plants.

20. A scientist observed the number of dolphins that could be seen from a beach. Each time he saw a dolphin, he wrote down the time it was seen. He entered the times into the spreadsheet below.

7:01 a.m.	7:06 a.m.	7:11 a.m.	7:14 a.m.	7:23 a.m.	7:36 a.m.
7:37 a.m.	7:49 a.m.	8:08 a.m.	8:53 a.m.	8:59 a.m.	9:00 a.m.
9:17 a.m.	9:33 a.m.	9:36 a.m.	10:04 a.m.	10:07 a.m.	10:14 a.m.
10:19 a.m.	10:30 a.m.	10:31 a.m.	10:32 a.m.	10:34 a.m.	10:37 a.m.
10:40 a.m.	10:42 a.m.				

To organize the data, the scientist made a dot plot showing the frequency with which dolphins were seen during each hour. Which dot plot correctly displays the dolphin observation information?

A.



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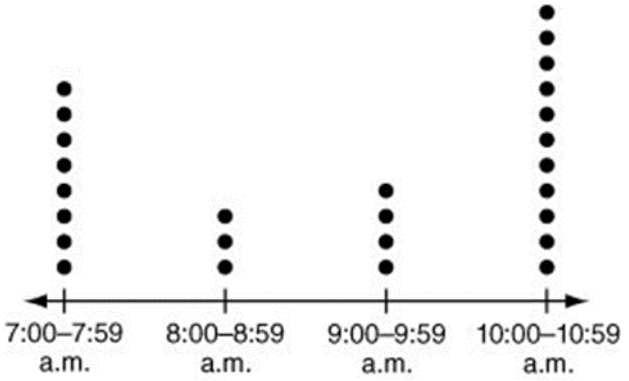

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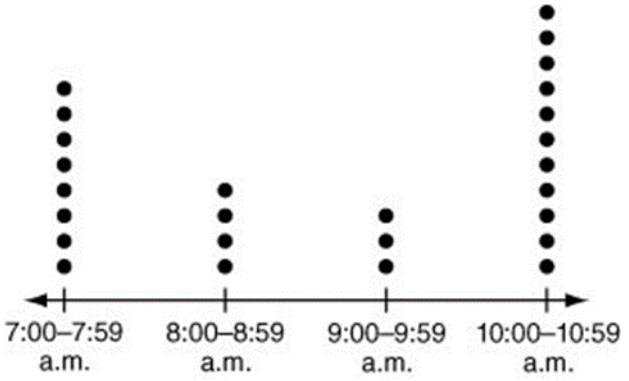
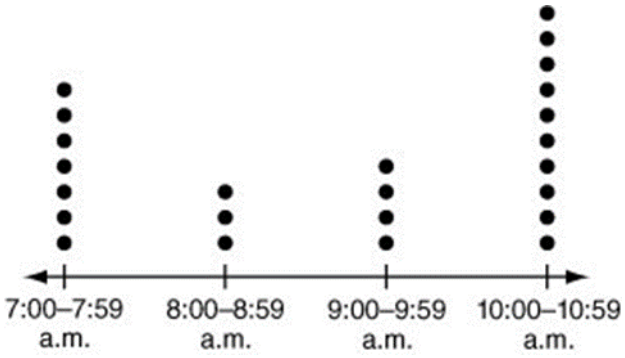


D.



21. Write an expression to show the quotient of the sum of 6 and *m* divided by 2.

22. Paul is saving $40 each week in order to buy a new bicycle that costs $300.

    Part A. Create a table showing the week number and the amount Paul saves for the first 6 weeks.

    Part B. Use the numbers from the table to create ordered pairs. On your graph paper, graph the ordered pairs. Be sure to label all parts of your graph.

    Part C. Write an equation to represent the relationship between time and money saved. Be sure to identify what your variables represent.

    Part D. Explain what the unit rate of the graph represents.

    Part E. Determine how many weeks it will take Paul to save enough money to purchase the bike. Show your work and state your answer as the least number of weeks necessary to save the money.

Place an "X" in the answer box below.

Answer the question on the Response Document provided.

Click next.