

TEST NAME: Math Gr 6 FAIM 2016 Form 2-A
TEST ID: 1549471
GRADE: Sixth Grade
SUBJECT: Mathematics
TEST CATEGORY: State Interim Assessment

Student:

Class:

Date:

Instructions

Use your Response Document to answer question 21.

1. Which set of numbers is in order from **least** to **greatest**?

A. $-\frac{1}{2}, 5.8, |-7|, |9|$

B. $|-7|, -\frac{1}{2}, 5.8, |9|$

C. $|9|, -\frac{1}{2}, 5.8, |-7|$

D. $|9|, |-7|, 5.8, -\frac{1}{2}$

2. Four people played a game in which they guessed the number of beans in a jar. Their guesses were subtracted from the actual number of beans in the jar, and the differences are shown below.

Ryan: 4

Charlie: -5

Lily: 0

Maria: -2

Which list orders the people from closest to farthest from the correct number of beans?

A. Lily, Maria, Ryan, Charlie

B. Charlie, Ryan, Maria, Lily

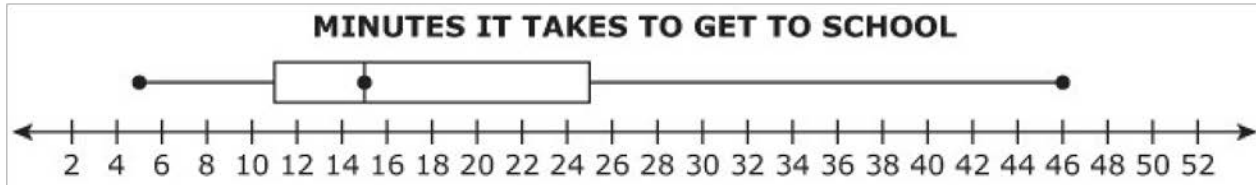
C. Lily, Charlie, Maria, Ryan

D. Charlie, Maria, Lily, Ryan

3. Allison collected the data below, which shows the amount of time, in minutes, it takes each of her classmates to get to school.

5, 12, 15, 12, 21, 21, 32, 6, 21, 25, 46, 10, 21, 25, 30, 5

Allison created the box-and-whisker plot below to represent the data she collected.



Which mistake did Allison make when creating her box-and-whisker plot?

- A. The minimum value is in the wrong location.
 - B. The first quartile is in the wrong location.
 - C. The third quartile is in the wrong location.
 - D. The median is in the wrong location.
4. Simplify the expression.

$$2(3x + 1) + 7$$

5. A stack of index cards is $\frac{3}{4}$ of an inch tall. If each card is $\frac{3}{160}$ of an inch thick, how many index cards are in the stack?

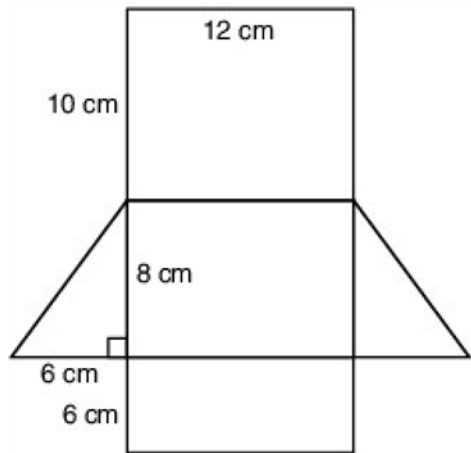
6. Janie is at the gas station. She has \$53.25 and buys a road map that costs \$7.68.

Part A. After she buys the road map, how much money will Janie have left?

Part B. Janie wants to buy 10 gallons of gas with the remaining money. What is the highest price per gallon that she can afford? Use words and/or numbers to show your work.

7. Point A is located at coordinates (a, b) , where a and b are not equal to zero. It undergoes a reflection across the x -axis followed by a reflection across the y -axis to create point A' . Which statement is true about the signs on the coordinates of point A' compared with the coordinates of point A ?
- A. Only the sign on the x -coordinate changed.
 - B. Only the sign on the y -coordinate changed.
 - C. The signs on the x and y -coordinates changed.
 - D. There was no change in the sign on either the x or the y -coordinate.

8. What is the surface area of the triangular prism with the following net?



- A. 288 cm^2
- B. 336 cm^2
- C. 384 cm^2
- D. 408 cm^2
9. Today, Mr. Wayne and Mr. Pickett are both wearing the same tie. Mr. Wayne repeats his ties every 12 days, and Mr. Pickett repeats his ties every 10 days. In how many days will both men be wearing the same tie again?

10. Tom wants to buy some writing pads for his office. Bookstore A offers writing pads at the prices below.

BOOKSTORE A WRITING PAD COSTS	
Number of Writing Pads	Cost (in dollars)
5	15
12	36

Bookstore B sells writing pads using the equation $C = 3.5p$ where C is the total cost, in dollars, and p is the number of writing pads.

Part A. Determine the cost of a single writing pad from each bookstore.

Part B. Which bookstore offers the least expensive rate for a writing pad? What is the cost of 33 writing pads purchased at the least expensive rate?

Use words and/or numbers to show how you got your answers.

11. The daily low temperatures in a city have been below 0° Fahrenheit (F) for the past two days. On Monday, the daily low temperature was -2°F and on Tuesday, the daily low temperature was -7°F . What is the absolute value of the change in daily low temperatures between these two days, in degrees Fahrenheit?

12. A math test was taken by 120 sixth graders. Each student's score is between 0 and 100. The teacher announces that the mean score was 76. Which of these **best** explains the value that the teacher announced?
- A. If the scores are put in numerical order, the value of the 50th score will be 76.
 - B. If the scores are put in numerical order, the value of the 60th score will be 76.
 - C. If the scores are added together and the sum is divided by 100, the result will be 76.
 - D. If the scores are added together and the sum is divided by 120, the result will be 76.
13. $\triangle RST$ has coordinates $R(2, 1)$, $S(2, 7)$, and $T(5, 1)$. What is the length of the shortest side of $\triangle RST$?
- A. 1
 - B. 3
 - C. 5
 - D. 6
14. A right rectangular prism is $4\frac{1}{2}$ units long, 3 units wide, and 2 units tall. What is the volume of the prism?
15. Which number from the list $\{0, 1, 2, 5, 25\}$ makes the inequality $5w < 5$ true?
16. What is the value of the expression shown below?
- $$4 + 2 \times 5^2$$
17. Sandhill Middle School has 894 students in the entire student body. There are 453 students who are girls. What is the ratio of boys to the entire student body, written as a fraction?

18. The following data represent the number of times a river has flooded per year for the past 10 years.

{4, 3, 3, 2, 10, 5, 4, 2, 8, 3}

Part A. What is the median of the data?

Part B. What is the spread of the data?

Use words and/or numbers to show how you got your answer.

19. Mr. Zhou surveyed his 25 students to find out how much time they spent doing homework each week. The results of his survey are shown in the table below.

SURVEY RESULTS	
Hours Spent on Homework per Week	Percent of Students
Less than 1	8%
1–2	28%
3–4	28%
5–10	32%
More than 10	4%

How many students spent 5–10 hours doing homework each week?

- A. 7
- B. 8
- C. 12
- D. 32

20. Emile works in a factory monitoring and recording the weight of molded metal parts. He compiles the data each week and reports the mean and range of the collected data. Which of these BEST compares these two values?
- A. The mean and range summarize the data set.
 - B. The mean and the range both describe how the data varies.
 - C. The mean describes how data varies while the range summarizes the data set.
 - D. The mean summarizes the data set while the range describes how the data varies.
21. In a given work week, Ramone is allowed to have less than 13.5 hours of overtime. Represent the number of overtime hours Ramone can work in a week on a number line diagram.

Place an "X" in the answer box below.

Answer the question on the Response Document provided.

Click next.

22. A kennel charges \$12 to take care of a dog for one day. Maria correctly plots points on a coordinate grid to represent the charges so she can look up the correct price for customers. Which coordinate pair represents a correct charge, y , based on the number of days, x ?
- A. (3, 30)
 - B. (4, 40)
 - C. (5, 45)
 - D. (5, 60)
23. Drew rode his bicycle 3 miles in 30 minutes. What is his average speed, expressed as a unit rate?