

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ Score: \_\_\_\_\_

**Algebra 1**  
**Constructed Response Packet # 3**

Module: *Module 1 – Operations and Linear Equations and Inequalities*

Eligible Content: *A.1.1.1.1 Represent and/or use numbers in equivalent forms*

Use the following values to answer the questions: 25%, 0.33, 15½%, 2/3,  $\pi$ ,  $\sqrt{3}$

A) Order the numbers from greatest to least.

\_\_\_\_\_

B) Which numbers from the list are rational numbers?

\_\_\_\_\_

C) Which numbers from the list are irrational?

\_\_\_\_\_

D) Give an example of another irrational number that is greater than all of the numbers in the set.

\_\_\_\_\_

# Algebra 1

## Constructed Response Packet # 3

Module: *Module 1 – Operations and Linear Equations and Inequalities*

Eligible Content: *A1.1.1.2 - Apply number theory concepts to show relationships between real numbers in problem-solving settings.*

A rectangular cardboard cutout of a Cheerios box has been cut out that has an area of  $15x^3 + 25x^2$ .

A) Find the width and the length of the rectangle.

Length: \_\_\_\_\_

Width: \_\_\_\_\_

B) If the width is doubled and the length is tripled of the Cheerios box, what is the new area of the polynomial?

Area: \_\_\_\_\_

C) A rectangular cardboard cutout of a Wheaties box has been cut out that has an area of  $36x^4 + 24x^2$ . What are the side lengths of the box?

Length: \_\_\_\_\_

Width: \_\_\_\_\_

D) What is the least common multiple (LCM) of the “original” Cheerios box and the “new” Cheerios box?

LCM: \_\_\_\_\_

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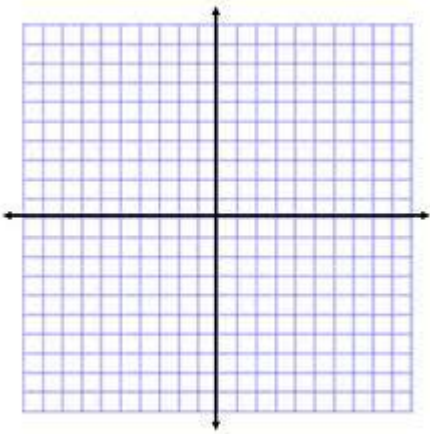
Module: *Module 1 – Operations and Linear Equations and Inequalities*

Eligible Content: *A.1.1.2.1 Write, solve, and/or graph linear equations*

You decide to rent a car for your vacation. The rental company charges \$50 to rent the car, plus \$40 per day.

- A) Write an equation to represent the situation. Let  $x$  represent the independent variable and  $y$  represent the dependent variable in the problem.

- B) Graph the equation from Part , A using any method. Be sure to label your axes with a scale.



- C) What are the restrictions on the domain of the equation from part A?

- D) What are the restrictions on the range of the equation from part A?

- E) If the total bill comes to \$850, how many days did you rent the car?  
Show all work and write your answer on the provided line.
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# Algebra 1

## Constructed Response Packet # 3

Module 1: *Absolute Values to solve problems*

Eligible Content: *A.1.1.3.1 Absolute Value to solve problems.*

Your soccer team averages between 2 and 7 goals per game.

- A) Write an absolute value inequality describing the number goals,  $x$ , per game.

Answer: \_\_\_\_\_

- B) Mr. Murray's soccer team scores on average  $|3x - 6| \leq 9$  goals per game. Graph the absolute value inequality correctly on the number line. Show work below.

Graph:



- C) Mr. Schmidt's score team's average score is graphed below. Write an absolute value inequality that could represent the given graph.



Answer: \_\_\_\_\_