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, π, $\sqrt{3}$

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:*_____

Algebra 1
Constructed Response Packet # 3

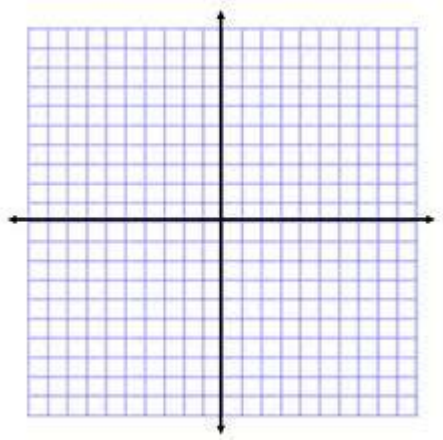
Module: *Module 1 – Operations and Linear Equations and Inequalities*

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.

_____

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: _____