

Name: _____ Date: _____ Period: _____ Score: _____

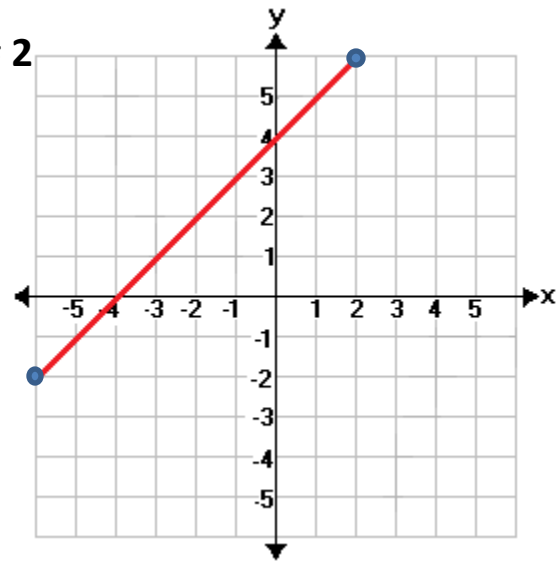
Algebra 1
Constructed Response Packet # 2

Module:

Module 2 – Linear Functions and Data Organizations

Eligible Content:

A1.2.1.1 Analyze and/or use patterns or relations.



A) Write the domain of the relation represented in the above graph.

B) Write the range of the relation represented in the above graph.

C) Is this relation also a function? Explain why or why not.

D) Write the equation of the line represented in the graph.

Equation: _____

Algebra 1

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Module: *Module 2 – Linear Functions and Data Organizations*

Eligible Content: *A1.2.1.1 Analyze and/or use patterns or relations*

Mary borrowed money from her parents to buy a car. Each month she paid them some of the money back. After one payment she still owed them \$7800, after the second payment she owed them \$7525, and after the third payment she owed them \$7250.

- A) If this pattern continues, how much will she owe them after her 6th payment?

Show your work.

- B) Write an equation where y represents the money Mary still owes her parents, and x represents the number of payments. Show your work.

Equation: _____

- C) How much money did Mary borrow from her parents to buy the car? Explain.

Algebra 1

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

Eligible Content: *A1.1.3.1 – Write, solve, and/or graph linear inequalities using various methods.*

Mrs. Smith earns a monthly salary of \$2,000 plus a 10% commission on her sales. Her goal is to make at least \$4,000 per month. What amount of sales does she need to meet her goal?

A) Write an inequality to represent the problem.

Inequality: _____

B) Solve the inequality you wrote in part A.

Solution: _____

C) For the month of March, Mrs. Smith's commission rate changes to 25%. To meet her monthly goal, will her total sales need to increase or decrease, and by how much?

Algebra 1

Constructed Response Packet # 2

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

Eligible Content: *A1.1.3.2 – Write, Solve, and/or graph systems of linear inequalities using various methods.*

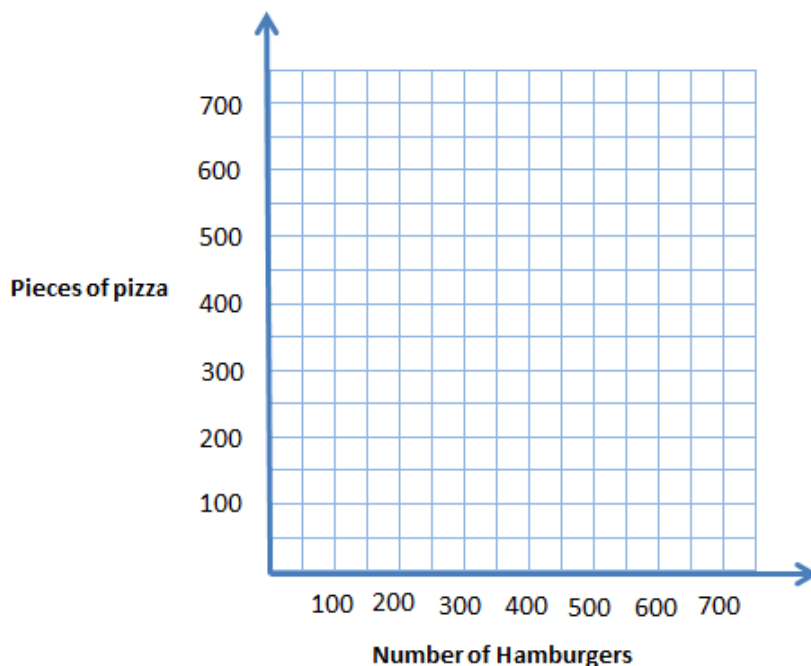
The cafeteria is getting ready to serve lunch. They will serve a minimum of 250 lunches. There are two choices for lunch - a hamburger or a piece of pizza. The hamburger will cost you \$3.00 and the pizza will cost \$1.50. The cafeteria has a budget of at most \$900 for lunch.

- A) The information can be modeled with a system of inequalities. When x is the number of hamburgers sold, and y is the number of pieces of pizza sold, two of the inequalities that model the situation are $x \geq 0$ and $y \geq 0$.

Write two more inequalities to complete the system.

Inequalities: _____

- B) Graph the solution set for the inequalities from part A below. Shade the area that represents the solution set.



- C) Pick an ordered pair to represent a reasonable solution for the number of hamburgers sold and the pieces of pizza sold.

Solution: _____