Constructed Response 1.)

Hector's family is on a car trip.

When they are 75 miles from home, Hector begins recording their distance (d), in miles, after h hours in the table below.

Hours (h)	Distance (d)		
0	75		
1	100		
2	125		
3	150		

- A.) Write an equation to find the distance driven (d), in miles, after a given number of hours (h).
- B.) Hector also kept track of the remaining gasoline. The equation shown below can be used to find the gallons of gasoline remaining (g) after distance driven (d), in miles.

$$g = 50 - \frac{1}{10}d$$

	10
Distance (d)	Gallons (g)
100	
200	
300	

C.) Draw the graph of the line formed by the points in the table from part B.



D.) Explain why the slope of the line drawn in part C must be negative.

Constructed Response 2

Vic and Eva buy used cars at the same time. Vic buys a car with 100 miles on it. He drives an average of 10 miles a week. The equation below can be used to determine how many miles, m, will be on the car after any number of weeks driving, w.

$$m = 10w + 100$$

- A.) In how many weeks will it have 1,500 miles on it?
- B.) Use the system on equations below to find in how many weeks Vic's and Eva's cars will have the same number of miles on them.

$$m = 10w + 100$$
$$m = 15w + 80$$

C.) How many miles, m, will the cars have on them when the number of weeks, w, is the same? Use the system of equations from part B. Show how you found your answer.

Constructed Response 3.)

During the summer, Kaleighna mows lawns to earn money. She keeps track of the number of lawns she mows and how many hours it takes her each day for five days. The table below shows her data for one week.

Number of	5	3	2	3	1
lawns					
Number of	4	5	3	6	1
hours					

A. Graph the points from the table above and label each axis



- B. Identify the domain and range.
- C. Explain how you know whether or not this relation is a function.

Constructed Response 4.

A band sells CDs for \$5 each and T-Shirts for \$10 each. Sarah wants to buy some CDs and T-shirts as gifts for her friends, but she can spend a total of \$80 at most.

- A. Write an inequality using x and y variables to represent this situation.
- B. Explain what the variables x and y represent in your inequality.
- C. Graph your inequality on this coordinate plane. Shade the area that represents the solution set.



D. Provide two different solution to your inequality.