Name: Date:

Understand how to compare two linear functions (i.e. rate of change, etc.) with the same representation (algebraically, graphically, numerically in tables, or by verbal description).

CONGRATULATIONS!!!!!! You have just graduated from college and have been offered 3 different jobs. When you talked to the secretary about the pay they have given you the following information.
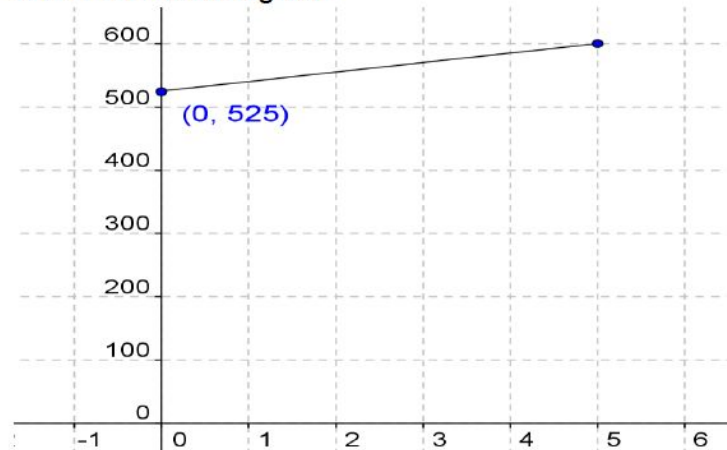
Job 1: Information given

hours	11	13	15	17
pay	648	684	720	756

Job 3: Information given:
We will pay you twenty-five dollars per hour plus a stipend of two hundred and twenty five dollars.

Job 2: information given

1) Write the equation to represent Job # 3.

2) Determine how much money you make per hour for each job.

   Job 1:

   Job 2:

   Job 3:

3) Determine which job would pay more if you worked 20 hours.

John purchases rice from his local grocery store in bulk. He finds the cheapest deal to cost him $5 per pound. Della purchases rice and her information is displayed in the table below.

0	3	6	9	12	15
0	9.75	19.50	29.25	39	48.75

4) Determine who found the cheapest cost per pound of rice.

It has been observed that a particular nail's growth is directly proportional to time. The following ordered pairs represent the nail growth: (0, 3) (8, 7). Another nail's growth is shown on the graph below:
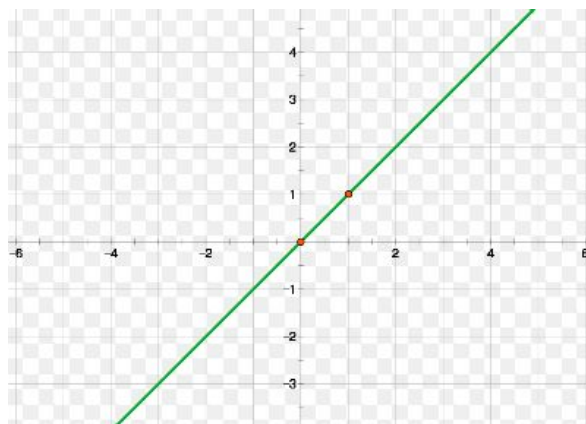
5) Determine which nail grows at a faster rate. (Show/Explain your answer.)

Alex is going to rent a bicycle. He can rent one from Fred's Bicycle. The cost of a rental bike from Fred's is represented by the following equation: $y = 10 + 0.20x$ where y is the cost and x represents the number of miles. Alex could also rent a bike from Bike's R' US. The cost for a rental bike there is represented by this equation: $y = 5 + 0.75x$ where y is the cost and x represents the number of miles.

6) Determine which bike rental company is cheaper per hour. (Show and/or explain your answer.)

7) Determine which company would be cheaper if Alex was going to go for a 10 mile bike ride.

Melinda is searching for the cheapest gas in town. At one gas station she sees they are charging 3.09 per gallon. One of her friends tells her the following ordered pairs represent the cost at another gas station: (5, 15.50), (7, 21.70). Finally, she sees on the news the following equation representing the cost at another gas station: $y = 3.05x$

8) Determine which gas station charges the cheapest gas. (Show/Explain your answer.)

The table below represents the height of a plane above the ground.

0	2	4	6	8	10
30,000	26,000	22,000	18,000	14,000	10,000

The graph below represents the height of another plane above the ground.
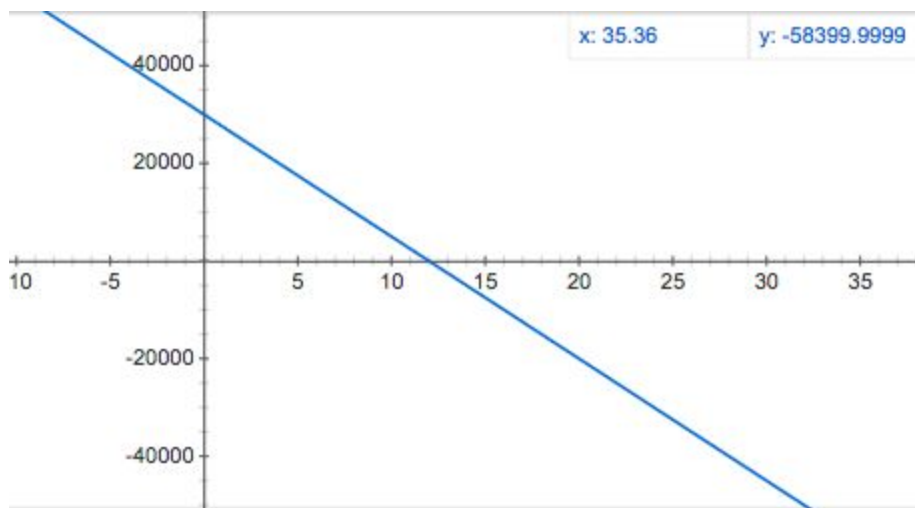
9) Determine which plane descends at a faster rate. (Show/Explain your answer.)