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)

John purchases lobster from the fishery on Commercial Street in Portland. He finds the cheapest deal to cost him $5.25 per pound. Hillary decides to ride to Bath and meet up with a local lobsterman by Bath Iron Works. She purchases lobster according to the table below.

Pounds of Lobster	12	14	16	18	20
Price	54	63	72	81	90

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

It has been observed that the amount of pollution on the island in Rumford increases at a constant rate throughout the day. The following ordered pairs represent the pollution in Rumford in parts per million: (0, 30) (10, 280). The pollution in Skowhegan also increases at a constant rate throughout the day. The pollution in Skowhegan is shown in the graph below.
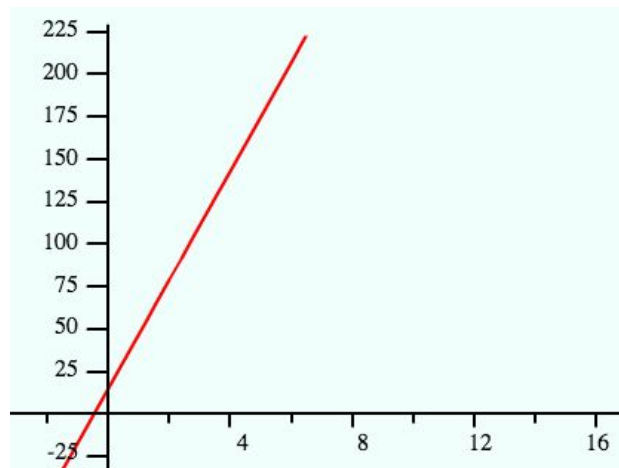
5) Determine which town has the lower pollution rate. (Show/Explain your answer.)

Melinda needs her car towed from her driveway. She calls two towing companies. Help by Heath charges according to the following equation: $y = 25 + 0.15x$, where x represents the number of miles towed. William's Wrecker charges according to this equation: $y = 40 + .10x$, where x represents the number of miles towed.

6) Determine which towing company is cheaper per mile. (Show and/or explain your answer.)

7) Determine which company would be cheaper if Melinda wanted her car towed 35 miles.

A few pilots are chatting about the rate at which they are descending their planes when they land. One pilot announces he descends at a rate of 4,000 ft/second. One of his friends tells him the following ordered pairs represents how high he is above the ground at a given time: (0, 50,000), (3, 15,000). Finally, another pilot shows his descent can be modeled by the following equation: $y = 50000 - 4500x$

8) Determine which pilot is descending at the **slowest** rate. (Show/Explain your answer.)

The table below represents the speed of a driver during a road trip.

Hour	2	4	6	8	10
Speed	120	240	360	480	600

The following ordered pairs represent the speed of another driver during a road trip: (3, 135), (6, 270)

9) Determine which driver is traveling at a faster rate. (Show/Explain your answer.)