Name _____ Date _____ Hour _____

Problem 2.1 – Linear Models

Trend Lines

A) 1. Write an equation for the line that models the data for First State Bridge-Painting Costs.

2. Use the line graph to estimate painting costs for similar bridges that are

   a) 175 feet long b) 280 feet long

3. Use the equation to determine painting costs.

   a) 175 feet long b) 280 feet long

4. Use the line graph to estimate lengths of similar bridges for which the painting costs are

   a) $10,000 b) $60,000

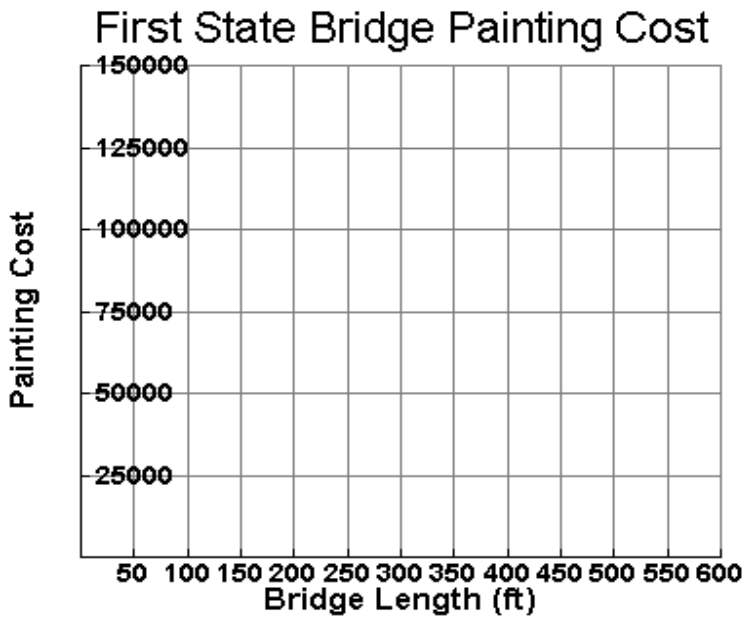
5. Use the equation to determine the lengths of similar bridges for which the painting costs are

   a) $10,000 b) $60,000

B) First State is also bidding on a different type of bridge. It has records for three similar bridges.

Bridge Number	Length (ft)	Painting Cost
3	150	$50,000
4	300	$80,000
5	500	$140,000

1. Plot these data points. Draw a line that models the pattern in the data points.



2. Write an equation for your line.

3. Use your line to estimate the painting cost for a similar bridge that is 200 feet long.

4. Use your equation to determine the painting cost for a similar bridge that is 200 feet long.

5. Use your line to estimate the length of a similar bridge that costs $100,000 to paint.

6. Use your equation to determine the length of a similar bridge that costs $100,000 to paint.