**Home Price vs Square Footage**

**Topic: Linear Equations and Lines of best fit**

Often, actual data does not represent an actual linear function. You will be asked to research home prices and size and derive a linear regression (line of best fit). This data will be used to answer questions and make predictions on average cost per square foot.

**Purpose:**Students will access the Internet to search for housing prices in Corvallis, Oregon and compare the prices to the number of square feet. A linear equation will be derived from these data on a coordinate plane using excel. Using information from the graph of the data and the equations of the function, students will answer questions about housing prices.

**Materials:** iPad/ computer lab, record sheet.

**Prior knowledge:** Students should be able to plot points on a coordinate plane and write an equation in slope-intercept form from a linear graph.

**Procedure:**

**Day 1:** Collect data on housing prices and square footage information. You need to find data from at least 20 properties in the Corvallis area and record on the back of this paper. The data should include the price of the property and the square footage of the house. Use the links on my website to help collect this data.

**Day 2:** Enter the data on excel and create a line of best fit. You will use this information to answer the following questions. Make sure you print your data, scatter plot, and question responses.

**DUE: WEDNESDAY 2/3**

**Questions: Responses must be typed and printed with data. (5 points)**

1. How much does a 5,000 sq. ft. home sell for in the location that was researched?

2. What does the slope m, of the equation represent?

3. What does the b value in the slope-intercept form of the equation represent?

4. What does the line represented on the graph indicate about the cost of housing?

5. How would this graph vary if data was collected from other parts of the country?

6. How could this graph help you decide if you wanted to purchase a house?

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| **Price vs Square Footage Data** | | |
|  | **Price** | **Square footage** |
| **1** |  |  |
| **2** |  |  |
| **3** |  |  |
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