

Measurement and Error

Pre-lab Test 2 (10 Points)

Print Name _____
Lab Section _____ Date _____

Staple your work sheet to this pre-lab test. You are required to show your calculations! Points will be taken off if your work is not neat and well organized. Be sure to print your name on both sheets.

- 1) Fred wants to figure out how much extra it costs him to heat his house at 75° F. So, he does an experiment. He picks a week in January when the temperature is pretty much the same from day to day and measures how much oil he burns, keeping the house at a given temperature. On the first day he sets the temperature to 55.00° F and in 24 hours burns 12.23 gallons of oil. The next day at 60.00° he burns 17.25 gallons. For 65.00° he burns 19.31. For 70.00° he burns 22.33. For 75° he burns 26.99. Use your calculator to perform a Linear Regression on this data set. What are the slope, intercept at correlation coefficient for this data.

Slope = _____, Intercept = _____, R = _____

- 2) One of the data points has a problem with it. Figure out which one. Remove it from the data set. And, redo your Linear Regression.

Slope = _____, Intercept = _____, R = _____