

Introduction to Linear Regression

Name _____ Pd. _____

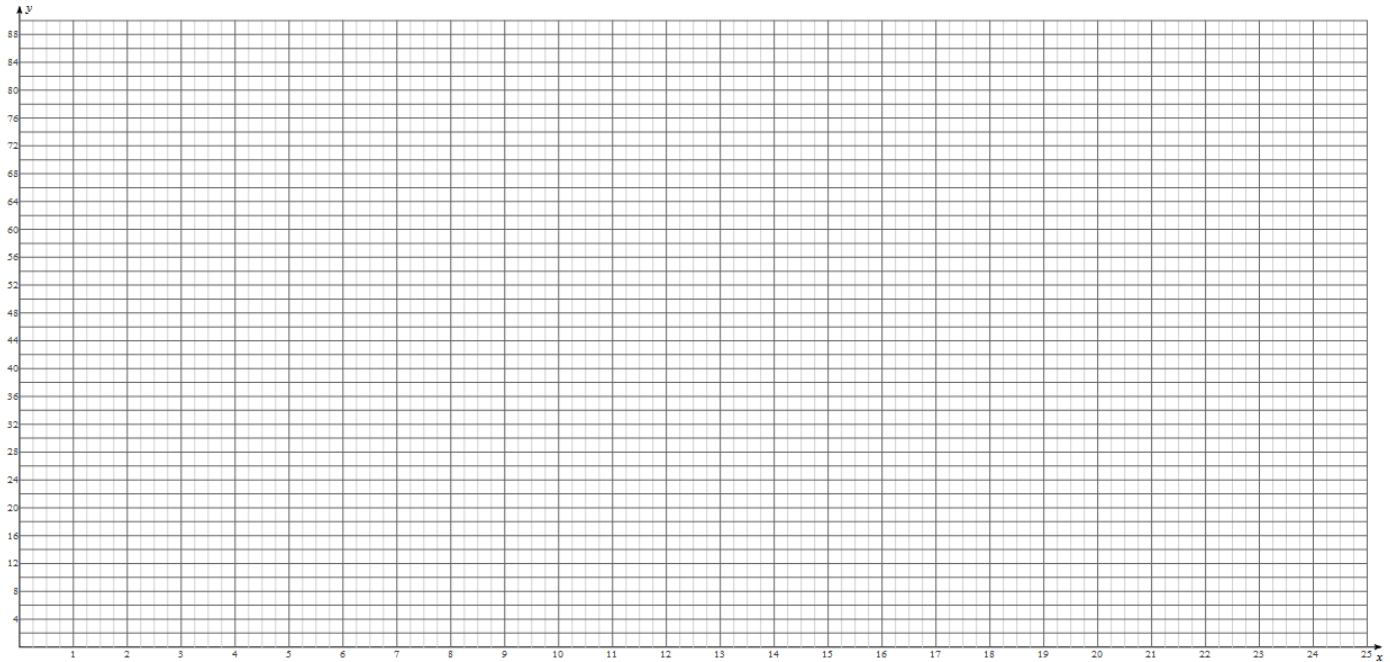
Algebra I – Mr. Allen-Black & Ms. Gulamali

A pediatrician took a random sampling of 7 of her patients in order to analyze their ages and heights. The ages and heights are listed below:

Age	Height
7 yrs.	45"
15 yrs.	62"
10 yrs.	55"
2 yrs.	36"
18 yrs.	72"
13 yrs.	63"
8 yrs.	44"

1) Which variable in this situation is the independent variable?

2) Which variable is the dependent variable?



3) On the grid above, label each axis clearly and graph each data point.

4) Draw a "line of best fit" for the data you plotted. Give the best estimate possible for the equation of the line in slope-intercept form. (We will be looking at other types of functions to model data, but today we are going to focus on linear models.)

5) Based on your line, how tall would you expect a 5 year old child to be? Explain how you used either your graph or your equation to answer this question.

6) Based on your line, how tall would you expect a newborn baby to be? Explain how you used either your graph or your equation to answer this question.

7) Based on your line, how tall would you expect a 23 year old to be? Do you think that the linear model is a good predictor of height?