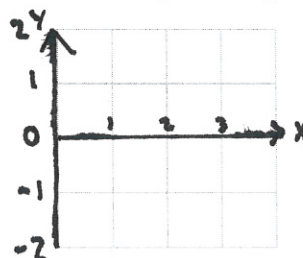
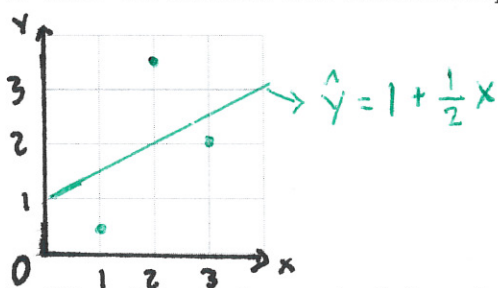


1. I would like to investigate the relationship between hours studied per week, and overall grade in STAT 145. Using a sample from last semesters students, I find that the two have a correlation of 0.70. The mans and standard deviations are given in the table below.

	Mean	Std Dev
Hours Studied	6.75	0.88
Overall Grade	80	10

- (a) Find the equation for the Regression Line. (Find the slope and the intercept).
- (b) Fred studies for 7 hours, and he scores an 85 on the Exam. What is the residual associated with this data point?
- (c) Ted studies for 35 hours; using your Regression Line, what do you predict his overall grade will be? Does this answer make sense? What is this called?

2. Draw the Residual Plot which corresponds to the following Scatterplot.



Add points here

3. (Bonus) In the Scatterplot below, the data is seperated categorically by color. The Regression Line calculated just using the Blue data, is given in blue. The same is done for the Red data. If we no longer seperate the data by category, what do you think the Regression Line will look like for all of the data? Draw it in on the plot.

Figure 1:

