

Name: _____

Chapter 3

Topic

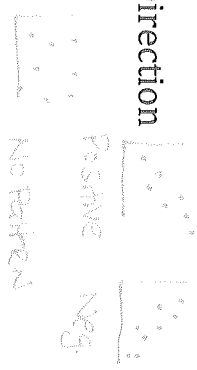
Is about...

Scatter Plots & Regression 2-variables - Quantitative Data

Main Idea

Describe the Scatterplot

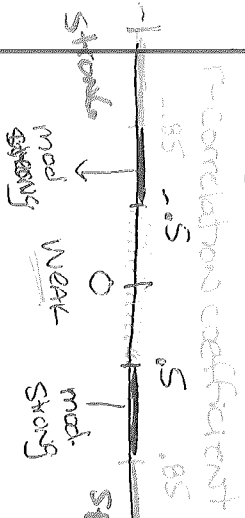
Direction



Outliers

Outliers pull the Regression line towards them

Strength



$r^2 = \frac{y\text{-var}}{x\text{-var}}$

VARIATION IN y VALUE CAN BE EXPLAINED BY

Main Idea

Regressions

Linear

$\hat{y} = a + bx$



Slope

As the x -value increases by Δ unit, the y -value increases/decreases by Δ slope

Intercept

When $x=0$ the PREDICTED y IS y -int.

~~Nonlinear~~

Quadratics: $\hat{y} = ax^2 + bx + c$

Exponential: $\hat{y} = a \cdot b^x$

Main Idea

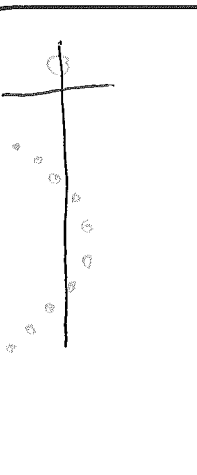
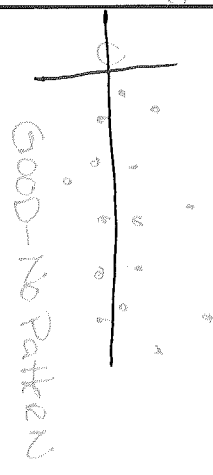
Residuals

Residuals = Actual - Predicted

NEG Residual - over predicted

Positive Residual - under predicted

Residual Plot



Any other type of graph is a better FIT

Main Idea

Outliers

Effect on Correlation



Slope and Intercept

