

Unit 3: Data Analysis

Unit Topics

Section	Issues <i>Ways the course connects to the world around me...</i>	Concepts <i>Things I need to be able to explain are...</i>	Skills <i>Things I need to practice are...</i>
3.1 Central Tendency (3.2 in text)		A. When are mean, median and mode useful? B. Identify right and left skew from a graph and from the mean/median	A. Calculate the mean, median and mode of a data set by hand and using technology B. Calculate a weighted average of a data set C. Approximate the mean, median and mode of data from a histogram
3.2 Creating Histograms (3.1 in text)		A. What type of data should be used to create a histogram? B. How can we describe a set of data by the shape of its histogram? (uniform, u-shaped, skew, mound etc.)	A. Calculate the range, select appropriate bin widths and determine frequencies from a data set B. Create a histogram by hand and using technology
3.3 Measures of Spread (3.3 in text)	A. How should we ask about gender in studies?	A. Describe what IQR and standard variation are used for	A. Calculate IQR by hand B. Calculate standard deviation and variance by hand and using technology
3.4 The Normal Distribution (3.4 in text)	A. How does normal distribution relate to tossing a coin or a quincrux	A. What is the normal distribution and what can it be used for? B. What are the useful properties of the normal distribution?	A. Sketch a normal distribution curve based on its mean and standard deviation B. Approximate the percentage of data that falls between 1, 2 and 3 standard deviations
3.5 Applying Normal Distributions (3.5 in text)	A. What is the danger of applying z-scores to any data we find?	A. What does a z-score represent? B. How can we represent probabilities of outcomes as percentiles?	A. Calculate z-scores for a value X B. Use the z-score to look up and calculate probabilities in normally distributed data

Review: 1) Textbook Pg 199-200 all questions are applicable

2) Go back and make sure you have completed all the homework questions from the chapter