Name: _____

Accelerated Pre-Calculus

April 2022

Unit 9- Statistics

Monday	Tuesday	Wednesday	Thursday	Friday
11 9.01 Review of Measures of Center and Spread • Mean, Median, Mode • Range, IQR, MAD • Box & Whisker Plot HW: 9.01	12 9.02 New Measures of Spread • Variance • Standard Deviation HW: 9.02	13 9.03 Standard Deviation cont'd • Using Technology HW: 9.03	14 9.04 Normal Distribution • Empirical Rule • Probability as area under the curve HW: 9.04	15 9.05 Normal Distribution cont'd • Applications with Empirical Rule HW: 9.05
18 9.06 Standard Normal Distribution • Z-scores HW: 9.06	19 9.07 Standard Normal Distribution • Z-scores • Applications HW: 9.07 HW	20 9.08 Check In Quiz: Normal Distribution	21 9.09 Confidence Intervals • Proportions and Means HW: 9.09	22 9.10 Confidence Intervals Cont'd HW: 9.10 HW
25 9.11 Review HW: Finish Review	26 9.11 Review HW: Study	27 **9.12 TEST**	28	29

Statistics Formulas

Mean: A measure of central tendency. The average of a set of data. $\bar{x} = \frac{\sum x_i}{n}$

Median: A measure of central tendency. The middle value in a set of data.

Mode: A measure of central tendency. The value(s) that occur the most often in a set of data.

5 Number Summary: Minimum, Lower Quartile Q_1 (the median of the lower 50% of values), Median, Upper Quartile Q_3 (the median of the upper 50% of values), Maximum

Range: A measure of spread. Distance from minimum to maximum. $Range = Max - Min$

Interquartile range: A measure of spread. The distance from Q_1 to Q_3. $IRQ = Q_3 - Q_1$

Mean Absolute Deviation: A measure of spread. The average distance each value is from the mean. $MAD = \frac{\sum |x_i - \bar{x}|}{n}$

Variance: The average of the squared deviations each values is from the mean. $\sigma^2 = \frac{\sum(x_i - \bar{x})^2}{n}$

Standard Deviation: A measure of spread. The square root of the variance. $\sigma = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n}}$

Standard Deviation of a sample: $s = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}}$

Empirical Rule of the Normal Distribution:

68% of the values in a Normal distribution are within 1 standard deviation of the mean

95% of the values in a Normal distribution are within 2 standard deviations of the mean

99.7% of the values in a Normal distribution are within 3 standard deviations of the mean

Standardized Normal value: The number of standard deviations a value is above or below the mean. $z = \frac{x - \bar{x}}{\sigma}$