

Name: _____

Accelerated Pre-Calculus				
Unit 9- Statistics				
April 2023				
Monday	Tuesday	Wednesday	Thursday	Friday
10 9.01 Review of Measures of Center and Spread <ul style="list-style-type: none"> • Mean, Median, Mode • Range, IQR, MAD • Box & Whisker Plot HW: 9.01	11 9.02 New Measures of Spread <ul style="list-style-type: none"> • Variance • Standard Deviation HW: 9.02	12 9.03 Standard Deviation cont'd <ul style="list-style-type: none"> • Using Technology HW: 9.03	13 9.04 Normal Distribution <ul style="list-style-type: none"> • Empirical Rule • Probability as area under the curve HW: 9.04	14 9.05 Normal Distribution cont'd <ul style="list-style-type: none"> • Applications with Empirical Rule HW: 9.05
17 9.06 Standard Normal Distribution <ul style="list-style-type: none"> • Z-scores HW: 9.06	18 9.07 Standard Normal Distribution <ul style="list-style-type: none"> • Z-scores • Applications HW: 9.07 HW	19 9.08 Check In Quiz: Normal Distribution	20 9.09 Confidence Intervals <ul style="list-style-type: none"> • Proportions and Means HW: 9.09	21 9.10 Confidence Intervals Cont'd HW: 9.10 HW
24 9.11 Review ELA EOC (Section 1) 8:20-10:30am HW: Finish Review	25 9.11 Review ELA EOC (Sections 2 & 3) 8:20-11:45am HW: Study	26 9.12 TEST (part 1) Social Studies EOC (US History) 8:20-10:30am	27 9.12 TEST (part 2) Science EOC (Biology) 8:20-10:30am	28 Unit 10.01 (Day 1) Exponential Function Review Math EOC (Algebra) 8:20-11:45am

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. $z = \frac{x - \bar{x}}{\sigma}$