

Section 1: From assigned reading

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| <p>Why can the word <b>average</b> be misleading when used out of context?</p>   |  |
| <p>What is the <b>formula</b> for finding the <b>mean</b> of a data set? (Calculations will need to be completed both by hand and streamlined with the calculator)</p>               |  |
| <p>What is the <b>formula</b> for finding the <b>standard deviation</b> of a data set? (Calculations will need to be completed both by hand and streamlined with the calculator)</p> |  |

Section 2: From assigned reading

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| What is the <b>Empirical Rule</b> ?   |  |
| What type of distribution is required in order to apply the empirical rule?                           |  |
| What is the formula for calculating a <b>z-score</b> ?  |  |
| What is a z-score? What does it measure?  |  |
| What are the <b>standard units</b> of a normal curve?   |  |
| What is considered “ordinary results” or “not statistically significant” when interpreting z-scores?  |  |
| What is considered “extraordinary” or “statistically significant” results when interpreting z-scores? |  |
| What is the formula associated with <b>Chebyshev’s</b> theorem?                                       |  |
| When would Chebyshev’s theorem be applied?  |  |

Section 3: From assigned reading

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| What is a <b>Box and Whisker plot</b> a.k.a. <b>5-number summary</b> ? |  |
| What is the <b>interquartile range (IQR)</b> ?                         |  |
| Is the mean average represented in the 5-number summary?               |  |
| Is the range represented in the five number summary?                   |  |
| What are some other types of distributions?                            |  |
| How does one interpret the graphs of a 5-number summary?               |  |
| What is considered “ordinary results” when interpreting z-scores?      |  |
| What is considered “extraordinary” results when interpreting z-scores? |  |
| What is the formula associated with <b>Chebyshev’s</b> theorem?        |  |
| When would Chebyshev’s theorem be applied?                             |  |

Section 4 & 5:

Understand the terminology of **resistant to outliers**.

Be able to compare and contrast distinguishing features of data sets like:

- 1) the shape of their distributions,  
including Pearson's index for skewness
- 2) the shape of the 5 number summary,
- 3) the statistics describing the distribution  
mean,  
median,  
midrange,  
mode,  
standard deviation,  
variance,  
range,  
coefficient of variation,  
quartiles,  
interquartile range,

and be able to calculate and interpret z-scores as a tool for comparing results from two or more data sets.

Remember that not everything will be found in the book. Use the resources available to understand the vocabulary and concepts outlined in this document.