

Things you should know for the first exam.

Types of variables: Categorical and Numerical(Quantitative)

Five number summary: Minimum, Lower Quartile, Median, Upper Quartile, Maximum.

Range = Maximum – Minimum

IQR = Upper Quartile – Lower Quartile = $Q_3 - Q_1$

Sample mean: $\bar{y} = \frac{(\sum y)}{n}$

Sample standard deviation: $s = \sqrt{\frac{(\sum (y - \bar{y})^2)}{n - 1}}$

Standardized score: $z = \frac{y - \bar{y}}{s}$

Normal model:

68% between $\mu - 1\sigma$ and $\mu + 1\sigma$

95% between $\mu - 2\sigma$ and $\mu + 2\sigma$

99.7% between $\mu - 3\sigma$ and $\mu + 3\sigma$

Use Table Z:

$$z = \frac{y - \mu}{\sigma} \quad y = \mu + z\sigma$$