

## Sheet 411: Exploring Numerical Data—Concepts

- numerical, categorical
- distribution of a variable identifies the possible outcomes of a variable and how often it takes those outcomes
- dotplot
- histogram
- Shape: symmetric, skewed left, skewed right, unimodal, bimodal, uniform
- Center: mean  $\bar{x}$ , median  $M$
- quartiles  $Q_1$ ,  $M$ ,  $Q_3$ .
- Spread: range,  $IQR = Q_3 - Q_1$
- Outliers  $< Q_1 - 1.5 IQR$ ; Outliers  $> Q_3 + 1.5 IQR$
- resistance to outliers:  $\bar{x}$ ,  $M$ ; range,  $IQR$
- boxplot
- relative frequency histogram
- comparing distributions: SOCS