V3 - Descriptive Statistics Part 2

Course: Statistical Testing & Regression
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Descriptive Statistics – Part 2

❑ Range

❑ Interquartile range

❑ Percentiles

Other Descriptive Statistics for Variability

Range: simplest

- Difference b/t _____ and _____ data points.
  - Data: 2, 4, 7, 10, 15, 17, 18, 19, 19, 56
  - Range: _____ – _____ = ____
- Extremely sensitive to outliers

Interquartile Range

- ✓ Less sensitive to outliers (more robust)
- Amount of spread of "middle 50%" of data
  - Order data points & identify middle
  - Data: 2, 4, 7, 10, 15, | 17, 18, 19, 19, 56   n=10
  - $Q1$ = median of lower half = ____
  - $Q3$ = median of upper half = ____
  - $IQR = Q_3 - Q_1 = 19 - 7 = $ ____

Same set of data

3

Percentile

If your exam score is 80th **percentile**, then 80% of exam scores are

_____ yours.

_____ are specific **percentiles.**
Quartiles divide ordered data into 4 parts having same *n*.

Exam
100
95
93
92
87
85
81
80
79
75

25%   25%   25%   25%

Q1   Q2   Q3

- **Q1: first quartile**
  - 25% of data points *below* this point

- **Q3: third quartile**
  - _____ of data points *below* this point

- **Q2:**
  - _____ of data points *below* this point

Acknowledgement

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