

Exercise 1 – Descriptive Statistics on Simple Data

Ungrouped observations; show your steps. Round to 2 decimals where needed.

Data (n = 30):

12	15	13	16	12
14	18	20	12	17
16	15	19	12	14
18	21	15	13	16
12	17	14	18	22
15	12	16	14	18

Tasks:

- (a) Sort the data. Compute mean, median, and mode(s).
- (b) Compute Q1, Q3, and the interquartile range (IQR).
- (c) Compute the range.
- (d) Compute the sample variance and sample standard deviation (use $n-1$).
- (e) Compute the coefficient of variation (CV) in %.
- (f) Identify outliers using the $1.5 \times \text{IQR}$ rule.
- (g) Comment on skewness by comparing mean and median.

Note: Use the median-of-halves (Tukey) method for Q1 and Q3.