

Problem 1: Calculations

Consider the vector of data (1, 5, 6). Calculate by hand the mean, median, mode, variance, standard deviation, skew, and kurtosis.

Problem 2: Summary Statistics

A sample of seven grad students reported having eaten the following number of donuts this morning: 1, 1, 6, 2, 1, 6, 6.

- (a) Input the data into R.
- (b) Obtain the following summary statistics: min, 1st quartile, median, 3rd quartile, max, mean, mode, standard deviation. (Make sure to use type 6 quantiles.)
- (c) Obtain the inter-quartile range. (Make sure to use type 6 quantiles.)
- (d) Write a function that outputs the information in parts (b) and (c), automatically using type 6 quantiles.
- (e) Find the geometric mean.
- (f) Make a box plot.
- (g) Make a pie chart.