1. **Problem**
   A continuous random variable was measured 250 times. The histogram is shown below.
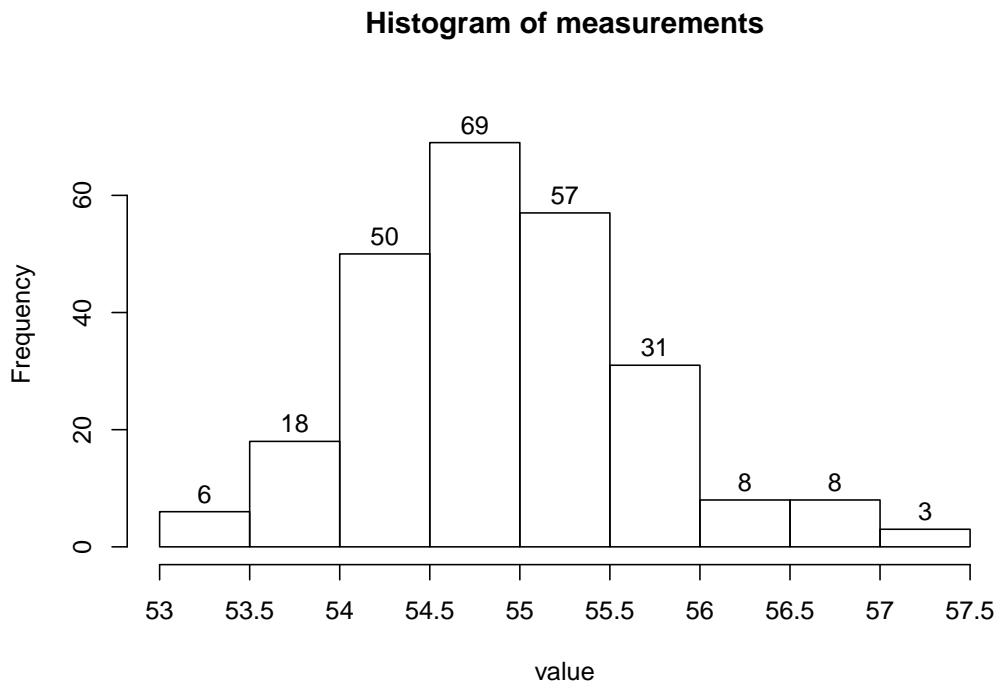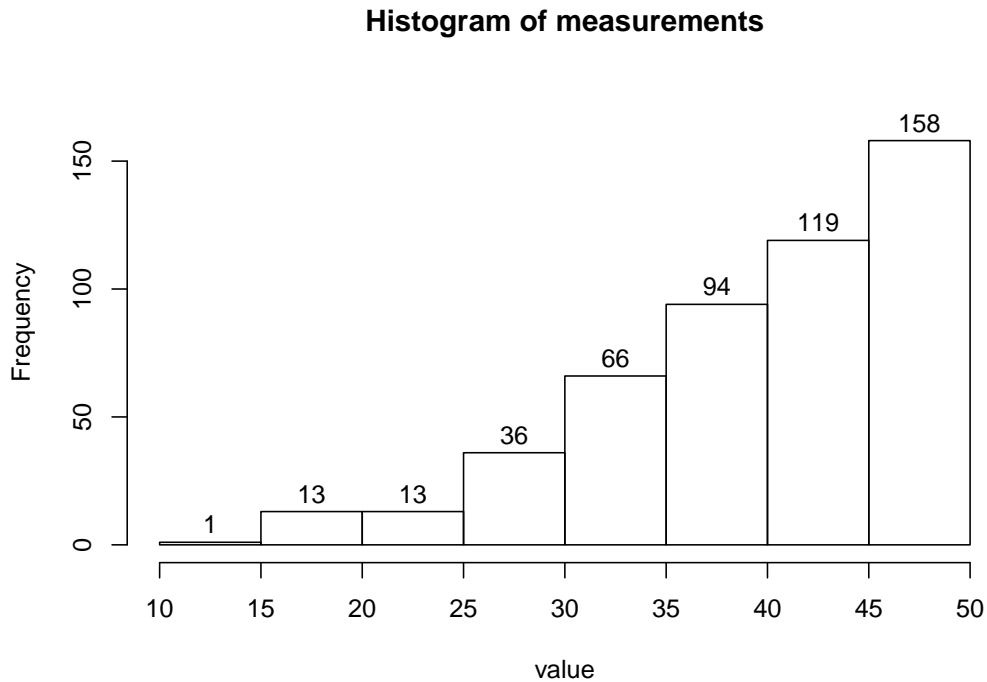
Histogram of measurements

(a) Describe the overall shape of the distribution. (symmetric mound, skew left, skew right, uniform, or bimodal)

(b) Estimate the range of the distribution (range = max-min).

(c) What percent of the measurements are greater than 54.5?

(d) What percent of the measurements are less than 55.5?

(e) Of the measurements greater than 54.5, what percent are less than 55.5?

(f) Estimate the value of the 95.6th percentile.

Solution

(a) symmetric mound

(b) 4.5

(c) 70.4%

(d) 80%

(e) 71.59%

(f) 56.5

2. **Problem**
   A continuous random variable was measured 500 times. The histogram is shown below.

Histogram of measurements

(a) Describe the overall shape of the distribution. (symmetric mound, skew left, skew right, uniform, or bimodal)

(b) Estimate the range of the distribution (range = max-min).

(c) What percent of the measurements are greater than 30?

(d) What percent of the measurements are greater than 40?

(e) Of the measurements greater than 30, what percent are greater than 40?

(f) Estimate the value of the 25.8th percentile.

Solution

(a) skew left

(b) 40

(c) 87.4%

(d) 55.4%

(e) 63.39%

(f) 35