1. **Problem**

A continuous random variable was measured 500 times. The histogram is shown below.
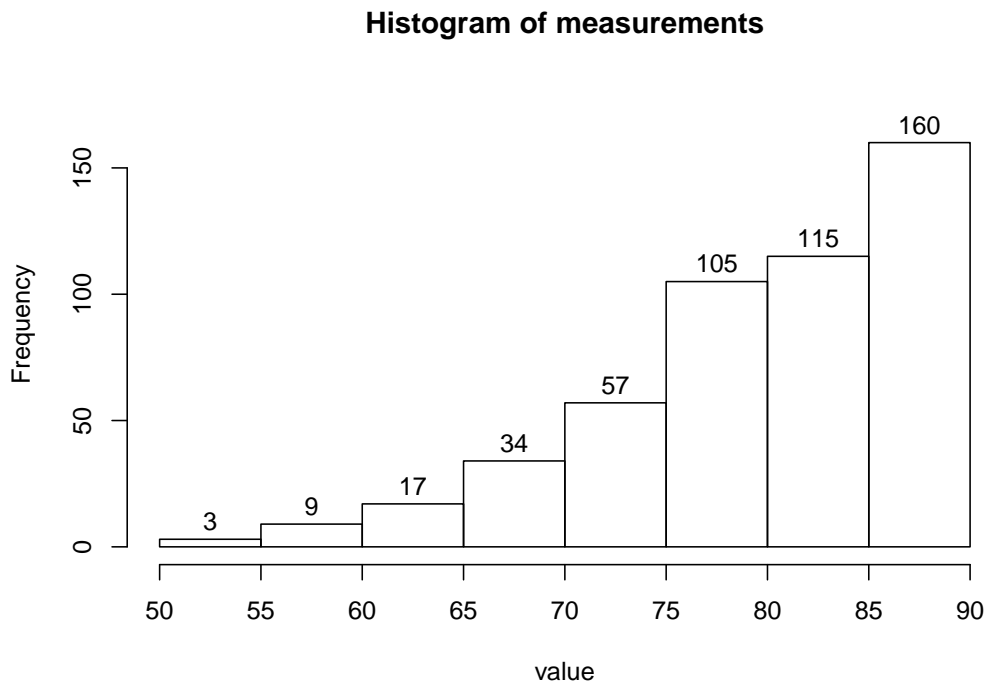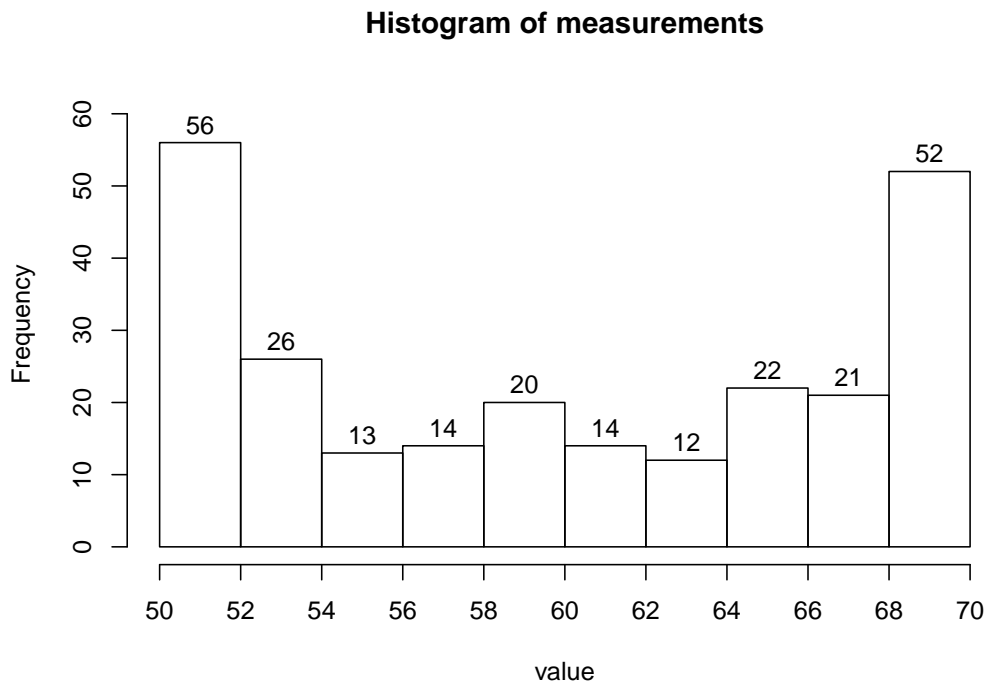
Histogram of measurements

(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 less than 60?

(d) What percent of the measurements are less than 50?

(e) Of the measurements less than 60, what percent are less than 50?

(f) Estimate the value of the 45th percentile.

Solution

(a) skew left

(b) 40

(c) 2.4%

(d) 0.6%

(e) 25%

(f) 80

2. **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 62?

(d) What percent of the measurements are less than 68?

(e) Of the measurements greater than 62, what percent are less than 68?

(f) Estimate the value of the 38th percentile.

Solution

(a) bimodal

(b) 20

(c) 42.8%

(d) 79.2%

(e) 51.4%

(f) 56