

Exercise 8.9.22

Six different national brands of chocolate chip cookies were randomly selected at the supermarket. The grams of fat per serving are as follows: 8; 8; 10; 7; 9; 9. Assume the underlying distribution is approximately normal.

- a. Calculate a 90% confidence interval for the population mean grams of fat per serving of chocolate chip cookies sold in supermarkets.
 - i. State the confidence interval.
 - ii. Sketch the graph.
 - iii. Calculate the error bound.
- b. If you wanted a smaller error bound while keeping the same level of confidence, what should have been changed in the study before it was done?
- c. Go to the store and record the grams of fat per serving of six brands of chocolate chip cookies.
- d. Calculate the mean.
- e. Is the mean within the interval you calculated in part (a)? Did you expect it to be? Why or why not?