

Exercise 8.9.12

Unoccupied seats on flights cause airlines to lose revenue. Suppose a large airline wants to estimate its mean number of unoccupied seats per flight over the past year. To accomplish this, the records of 225 flights are randomly selected and the number of unoccupied seats is noted for each of the sampled flights. The sample mean is 11.6 seats and the sample standard deviation is 4.1 seats.

- a.
 - i. $\bar{x} =$ _____
 - ii. $s_x =$ _____
 - iii. $n =$ _____
 - iv. $n - 1 =$ _____
- b. Define the Random Variables X and $\bar{X}$, in words.
- c. Which distribution should you use for this problem? Explain your choice.
- d. Construct a 92% confidence interval for the population mean number of unoccupied seats per flight.
 - i. State the confidence interval.
 - ii. Sketch the graph.
 - iii. Calculate the error bound.