

Learning objectives

After reading this chapter and doing the exercises, you should be able to:

- 1 Explain the purpose of an interval estimate of a population parameter.
- 2 Explain the terms margin of error, confidence interval, confidence level and confidence coefficient.
- 3 Construct confidence intervals for a population mean:
 - 3.1 When the population standard deviation is known, using the normal distribution.
 - 3.2 When the population standard deviation is unknown, using the t distribution.
- 4 Construct large-sample confidence intervals for a population proportion.
- 5 Calculate the sample size required to construct a confidence interval with a given margin of error for a population mean, when the population standard deviation is known.
- 6 Calculate the sample size required to construct a confidence interval with a given margin of error for a population proportion.