Learning objectives

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

1 Understand the difference between how probabilities are computed for discrete and continuous random variables.

2 Compute probability values for a continuous uniform probability distribution and be able to compute the expected value and variance for such a distribution.

3 Compute probabilities using a normal probability distribution. Understand the role of the standard normal distribution in this process.

4 Use the normal distribution to approximate binomial probabilities.

5 Compute probabilities using an exponential probability distribution.

6 Understand the relationship between the Poisson and exponential probability distributions.