

## 4.11 Hypothesis testing

# Checklist

## What you should know

By the end of this subtopic you should be able to:

- complete the four stages of a hypothesis test:
  1. State the null and alternative hypotheses
  2. Calculate the test statistic
  3. Find the  $p$ -value
  4. State your conclusion
- find the expected values from a contingency table using the formula or a calculator
- calculate the  $\chi^2$  statistic with the formula and with a calculator
- understand the difference between a test for independence and a goodness of fit test and in what context to use each one
- use  $p$ -values to determine significance
- compare the means of independent sets of data using either a one- or two-tailed  $t$ -test.

