

1. 'Six students enter a swimming race. The chance of a particular student winning is $\frac{1}{6}$.' Is this statement true or false? Give reasons to support your opinion.
2. Laura has an 80% chance of winning a tennis tournament. The other two players Mia and Emma are equally likely to win.
 - a What is the sample space?
 - b Are the outcomes equally likely? Why?
 - c What is the probability that Mia wins the tournament?
3. A bag contains 5 blue and 3 red balls. Find the probability of selecting the following at random.
 - a A blue ball
 - b A red ball
 - c Not a red ball
4. A four-digit number is formed from the digits 2,3,4 and 5 without replacement. What is the probability that the number:
 - a starts with the digit 4?
 - b is greater than 3000?
 - c ends with a 2 or a 3?
 - d is 2345?
5. Three people (A, B and C) applied for a manager's position and two people (D and E) applied for an assistant manager's position. a Use a table to list the all the possible outcomes. b What is the total number of outcomes?
6. Two coins are tossed and the results recorded.
 - a List the sample space by completing this tree diagram.
 - b Find the probability of the following results:
 - i Two tails
 - ii Head then a tail
 - iii One head and one tail