



- 23** It is known that 7 out of 10 students from a certain school will go on to university. If a group of 3 students is chosen at random from this school, find the probability that:
- (a) all will go on to university                      (b) some will go on to university.
- 24** An archer finds that her ratio of success to failure in hitting a bullseye is 9 to 1. If 3 arrows are shot, what is the probability of:
- (a) 3 successes                      (b) at least 2 successes                      (c) not more than 1 success?
- 26** A container holds a number of cubes: 60% are white and the remainder are black. Two cubes are randomly selected without replacement. What is the probability that:
- (a) they are the same colour                      (b) they are different colours?
- 28** Container *X* holds 1 white cube and 2 black cubes. Container *Y* holds 2 white cubes and 1 black cube. A container is selected at random and from it two cubes are selected without replacement. Draw a tree diagram to represent this three-stage process and find the probability that both cubes drawn are:
- (a) the same colour                      (b) different colours.
- 30** Of two coins *A* and *B*, *A* is a fair coin while *B* is loaded with a probability of 0.6 for heads. A coin is chosen at random and tossed twice. What is the probability of tossing two heads?