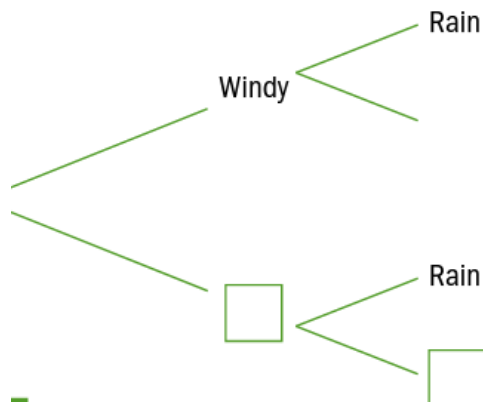


EXAM-STYLE QUESTION

- 3** There are equal numbers of boys and girls in a school and it is known that $\frac{1}{10}$ of the boys and $\frac{1}{10}$ of the girls walk in every day. Also $\frac{1}{3}$ of the boys and $\frac{1}{2}$ of the girls get a lift. The rest come by coach. Determine
- the proportion of the school population that are girls who come by coach,
 - the proportion of the school population that come by coach.
- 4** Determine the probability of getting two heads in three tosses of a biased coin for which $P(\text{head}) = \frac{2}{3}$.
- 5** A 10-sided dice has the numbers 1–10 written on it. It is rolled twice. Find the probability that:
- exactly one prime number is rolled,
 - at least one prime number is rolled.

EXAM-STYLE QUESTION

- 6** The probability of a day being windy is 0.6. If it's windy the probability of rain is 0.4. If it's not windy the probability of rain is 0.2.
- Copy and complete the tree diagram.
 - What is the probability of a given day being rainy?
 - What is the probability of two successive days **not** being rainy?



Exercise 3I

- 1** Three cards are drawn at random from a pack of playing cards. Each card is not replaced. Find the probability of obtaining
- a** three picture cards **b** two picture cards.

EXAM-STYLE QUESTION

- 2** A pencil case contains 5 faulty and 7 working pens. A boy and then a girl each need to take a pen.
- a** What is the probability that two faulty pens are chosen?
b What is the probability that at least one faulty pen is chosen?
c If exactly one faulty pen is chosen, what is the probability that the girl chose it?
- 3** In a bag are 4 red balls, 3 green balls and 2 yellow balls. A ball is chosen at random, and not replaced. A second ball is then chosen.
- a** Find $P(\text{the balls are both green})$.
b Find $P(\text{the balls are the same color})$.
c Find $P(\text{neither ball is red})$.
d Find $P(\text{at least one ball is yellow})$.
- 5** A club has 10 members, of which 6 are girls and 4 are boys. One of the members is chosen at random to be President of the club.
- a** Find the probability that the chosen President is a boy.
b Two people are chosen at random to represent the club in a competition. Find the probability that one boy and one girl are chosen.