SCORE A+

Data & Measurement

With Classified answer book

8

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3- Combined events

Work out the given probabilities:

1) Flipping two coins and getting two different outcomes.

2) Rolling two fair dice and getting 1 on one dice and not getting 1 on the other dice.

3) Picking one counter from a bag containing 4 pink counters and 8 blue counters, replacing it and picking the same colour again.

4) Picking one counter from a bag containing 4 pink counters and 8 blue counters, replacing it and picking the other colour.

5) Flipping three coins and getting the same on all three.

6) Rolling a dice twice and getting the same number both times.

7) Alice has a bag containing 3 green counters, 4 blue counters and 5 yellow counters. She picks a counter, notes its colour and replaces it. She picks a second counter at random. What is the probability that she picks the same colour both times?

8) Alice has a bag containing 3 green counters, 4 blue counters and 5 yellow counters. She picks a counter, notes its colour and replaces it. She picks a second counter and replaces it. What is the probability that she picks two different colours?

9) Alice has a bag containing 3 green counters, 4 blue counters and 5 yellow counters. She picks a counter, notes its colour and replaces it. She picks a second counter, notes its colour and replaces it. She picks a third counter, notes its colour and replaces it. What is the probability that she picks the same colour three times?

10) The probability that Mark scores a penalty is $\frac{1}{3}$. Mark takes 2 penalties.

Find the probability that he scores at least once.

11) Phil flips three coins. What is the probability he gets at least one each of heads and tails?

12) Jenna rolls two dice.
What is theprobability she gets different numbers on the two dice?

13 A sports team played 40 games.

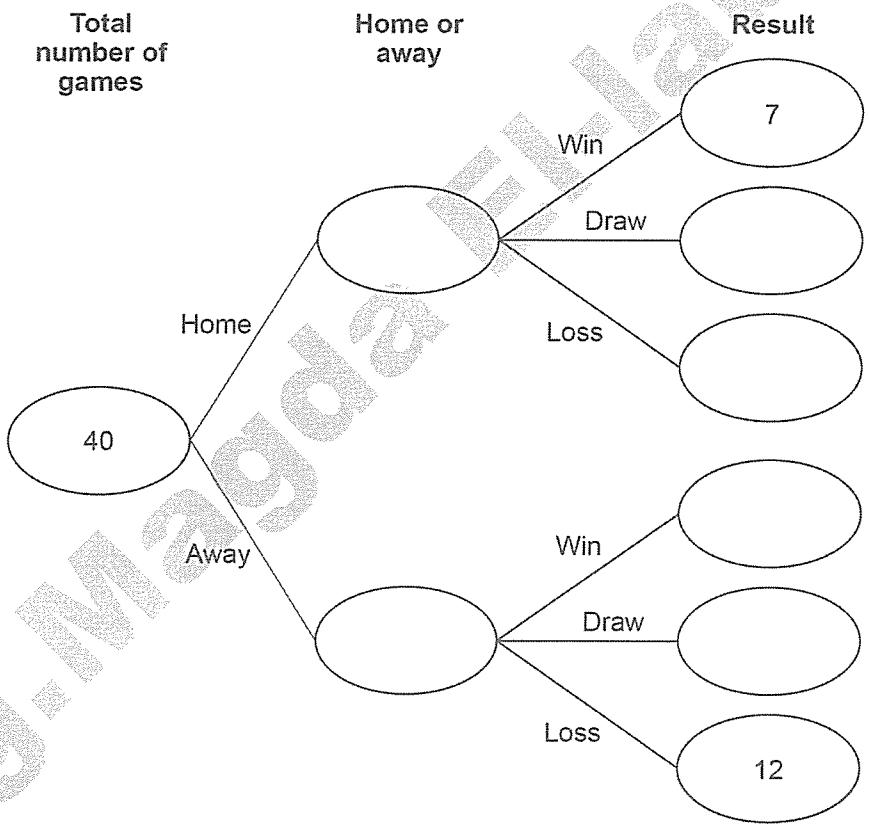
Half were home games and half were away games.

Each game was a win, a draw or a loss.

Of the **home** games, $\frac{2}{5}$ were losses.

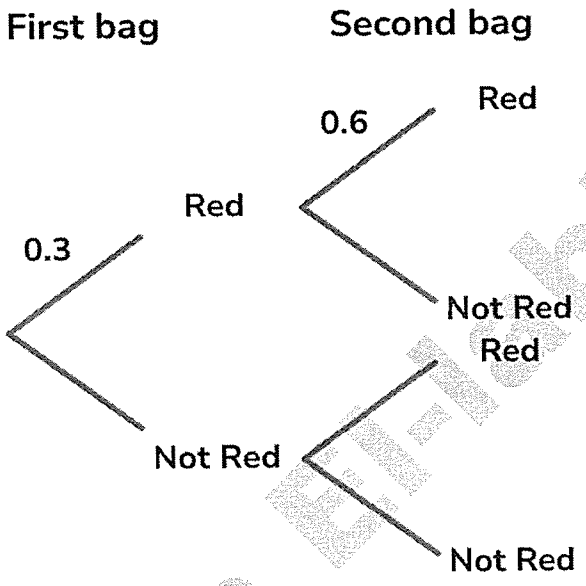
Of the **away** games, $\frac{1}{10}$ were wins.

(a) Complete the frequency tree.



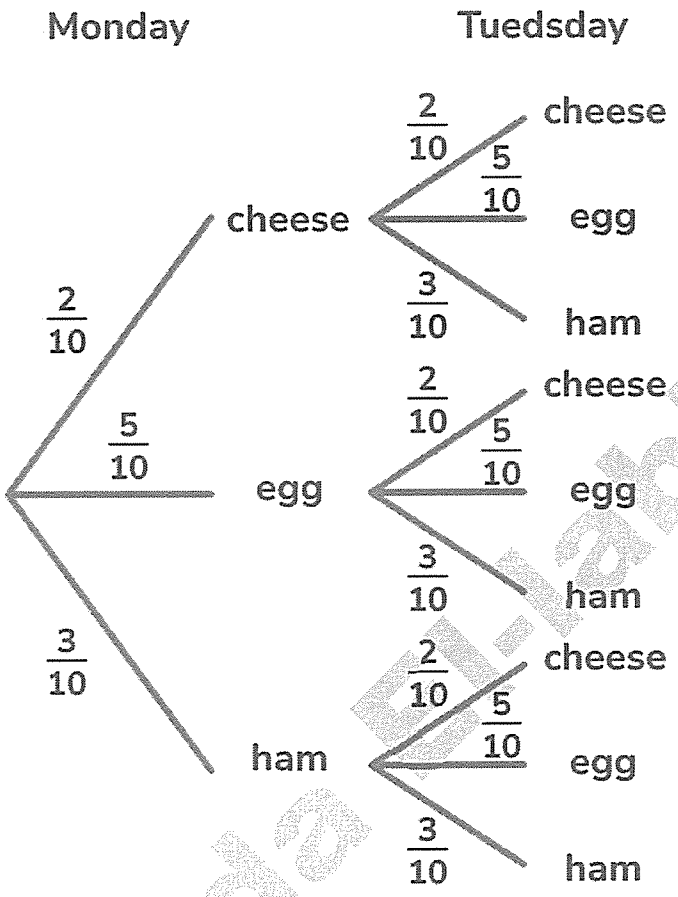
14) Geri has two bags of counters. She takes a counter from each bag. The probability that she takes a red counter from the first bag is 0. 3. The probability that she takes a red counter from the second bag is 0. 6.

(a) Complete the tree diagram.



(b) Calculate the probability that Geri picks two red counters.

15) The tree diagram shows the probability that Gary chooses each type of sandwich over two days.



Find the probability he has different sandwiches on Monday and Tuesday.