

Probability Tree Diagrams - 1

1. There are 3 green marbles and 5 red marbles in a box.

Sam picks a marble at random from the box and without putting it back into the box he then picks a second marble at random.

Find the probability that,

- (a) both of the marbles that Sam picked are red.

- (b) one of the marbles Sam picked is green and the other is red.

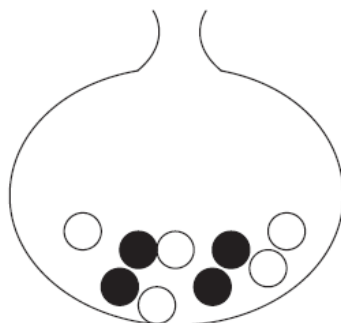
2. There are 4 green marbles, 2 red marbles and 3 blue marbles in a box.

Jay picks 2 marbles at random from the box without replacement.

Find the probability that the two marbles he picked are of different colours.

3.

A bag contains 4 black discs and 5 white discs.

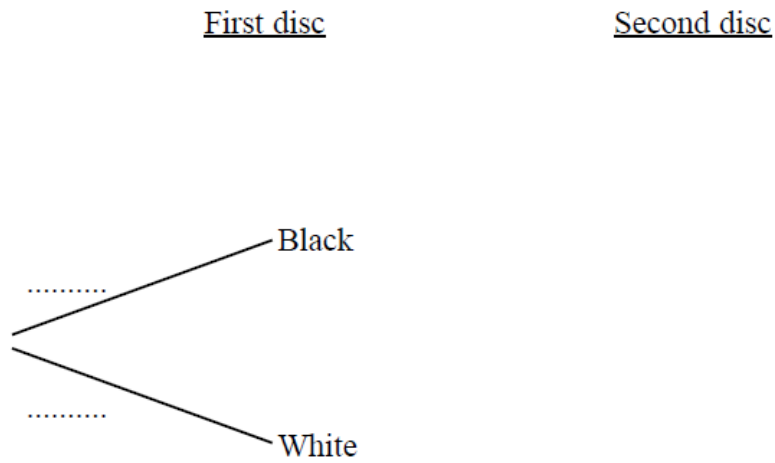


Ranjit takes a disc at random from the bag and notes its colour.

He then replaces the disc in the bag.

Ranjit takes another disc at random from the bag and notes its colour.

(a) Complete the probability tree diagram to show all the possibilities.



(4)

(b) Calculate the probability that Ranjit takes two discs of different colours.

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(3)

Question 4 is on the next page.

4. Alan has three 50p coins, two 20p coins and one 10p coin in his pocket.

He picks two coins at random from the pocket to put in a charity box.

(a) What is the probability that he puts a total of £1 into the charity box?

(c) What is the probability that he puts a total of more than 50p in the charity box?