

- 1 There are 12 counters in a bag.
There is an equal number of red counters, blue counters and yellow counters in the bag.
There are no other counters in the bag.
- 3 counters are taken at random from the bag.
- (a) Work out the probability of taking 3 red counters.

(2)

The 3 counters are put back into the bag.

Some more counters are now put into the bag.

There is still an equal number of red counters, blue counters and yellow counters in the bag.

There are no counters of any other colour in the bag.

3 counters are taken at random from the bag.

- (b) Is it now less likely or equally likely or more likely that the 3 counters will be red?
You must show how you get your answer.

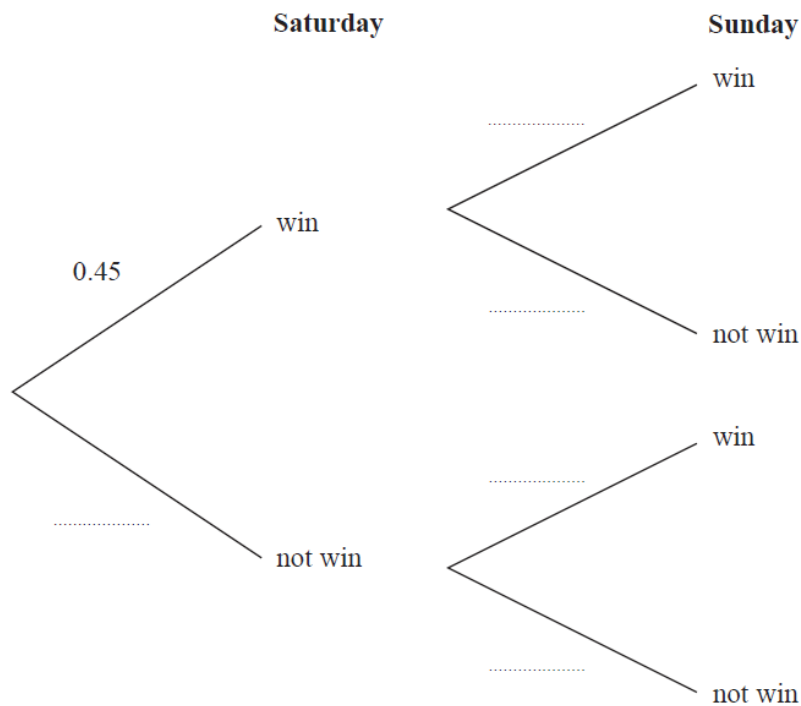
(2)

(Total for Question is 4 marks)

- 2 A darts team is going to play a match on Saturday and on Sunday.
 The probability that the team will win on Saturday is 0.45

If they win on Saturday, the probability that they will win on Sunday is 0.67
 If they do **not** win on Saturday, the probability that they will win on Sunday is 0.35

- (a) Complete the probability tree diagram.



(2)

- (b) Find the probability that the team will win exactly one of the two matches.

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 (3)

(Total for Question is 5 marks)

- 3 Marek has 9 cards.
There is a number on each card.



Marek takes at random two of the cards.
He works out the product of the numbers on the two cards.

Work out the probability that the product is an even number.

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(Total for Question is 3 marks)