

Probability Trees

Question Paper

Level	OCR
Subject	Maths
Exam Board	GCSE (9-1)
Topic	Probability
Sub Topic	Probability Trees
Grade Level	Grade 5
Booklet	Question Paper

Time Allowed: 35 minutes

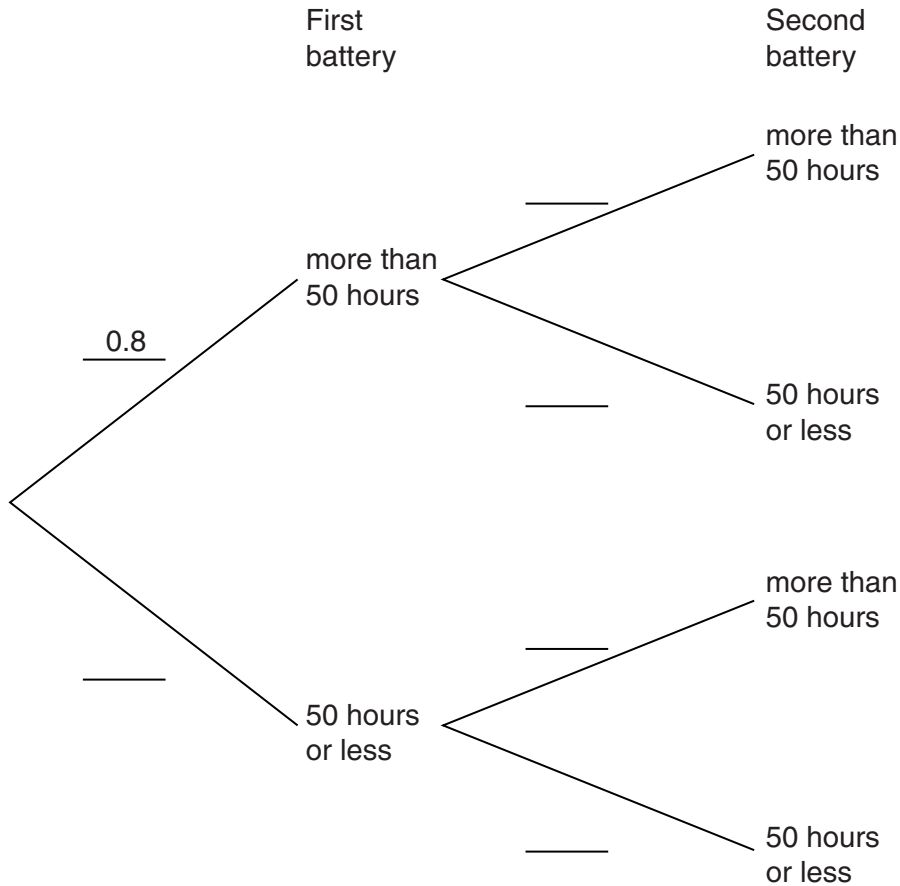
Score: /29

Percentage: /100

- 1 The probability that an *Everbright* battery works for more than 50 hours is 0.8.
A torch needs two working *Everbright* batteries to operate.

(a) Two new *Everbright* batteries are put into the torch.

Complete the tree diagram for the life of these two batteries.



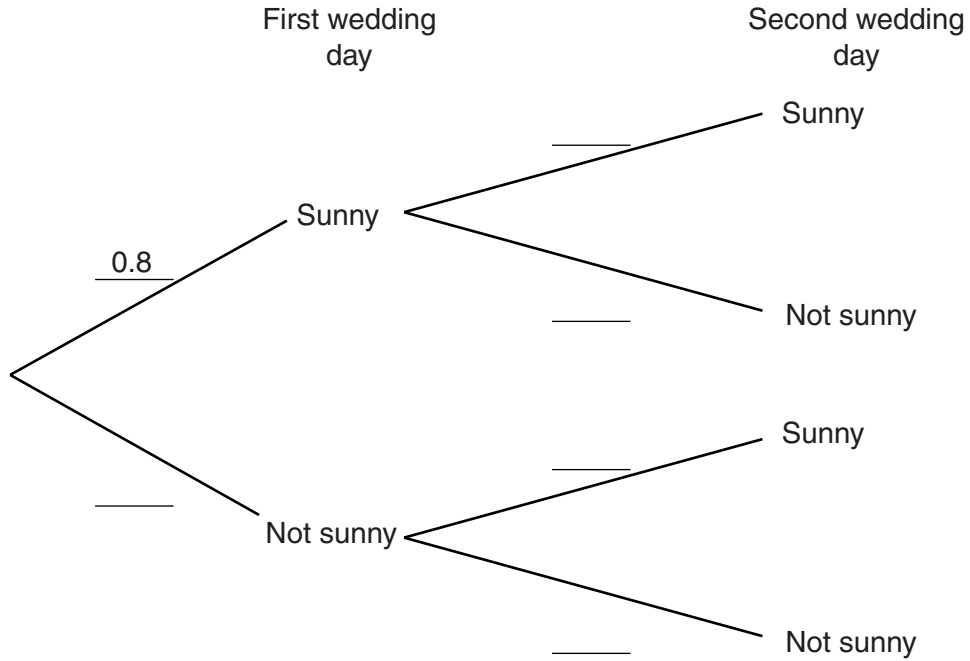
[2]

(b) Calculate the probability that the torch will **not** work for more than 50 hours.

(b) _____ [3]

- 2 Emma is going to two weddings in June.
The probability that any day in June is sunny is 0.8.

(a) Complete the tree diagram.



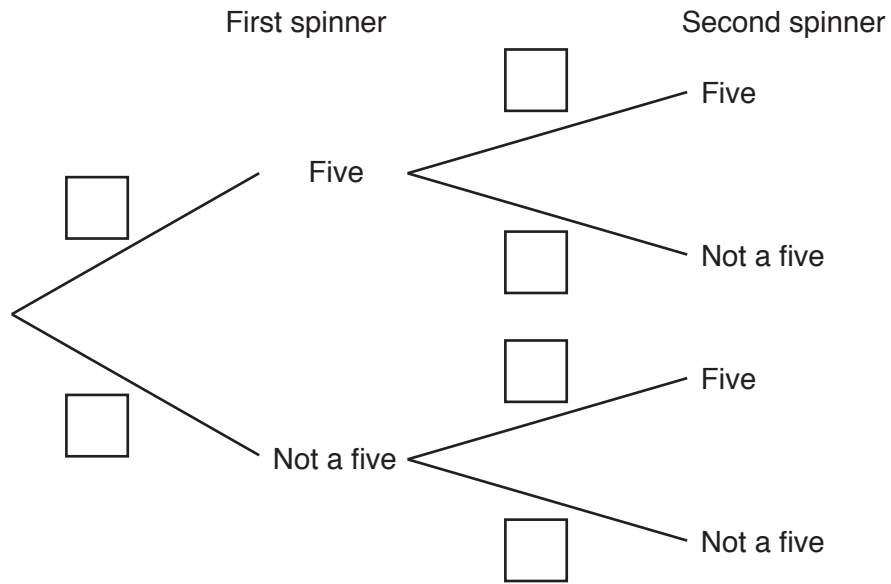
[2]

- (b) Work out the probability that just one of the two wedding days is sunny.

(b) _____ [3]

3 Ahmed is playing a game with two unbiased five-sided spinners, each numbered 1 to 5.
He spins the two spinners.

(a) Complete the tree diagram.



[3]

(b) Ahmed needs **exactly one** of the two spinners to show 5 to win the game.

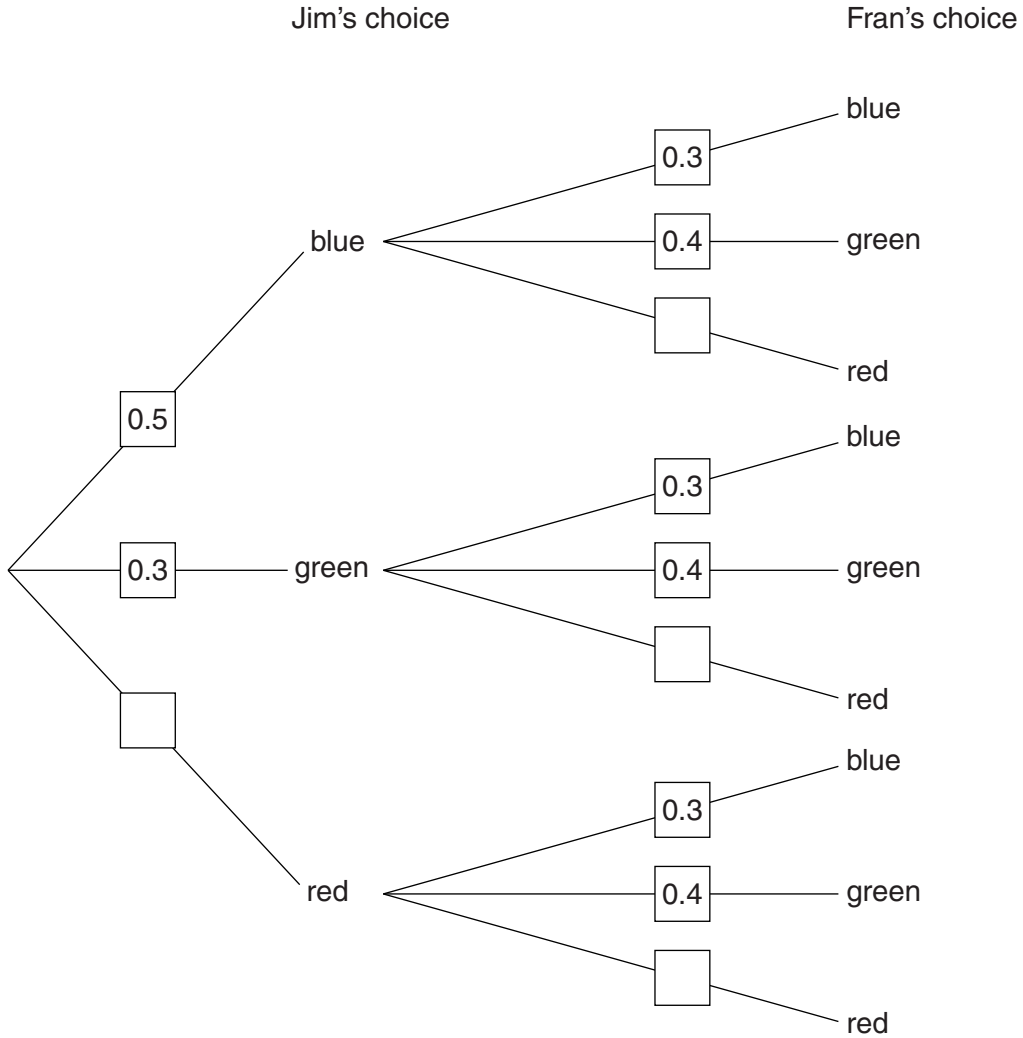
Calculate the probability that Ahmed wins the game.

(b) [3]

- 4 Jim and Fran each have a bag containing different numbers of blue, green and red counters only. Jim chooses a counter at random from his bag and then Fran chooses a counter at random from her bag.

The probabilities of randomly choosing blue and green counters are shown in the tree diagram.

- (a) Complete the tree diagram.



(b) Calculate the probability that one of the counters chosen is blue and the other is green.

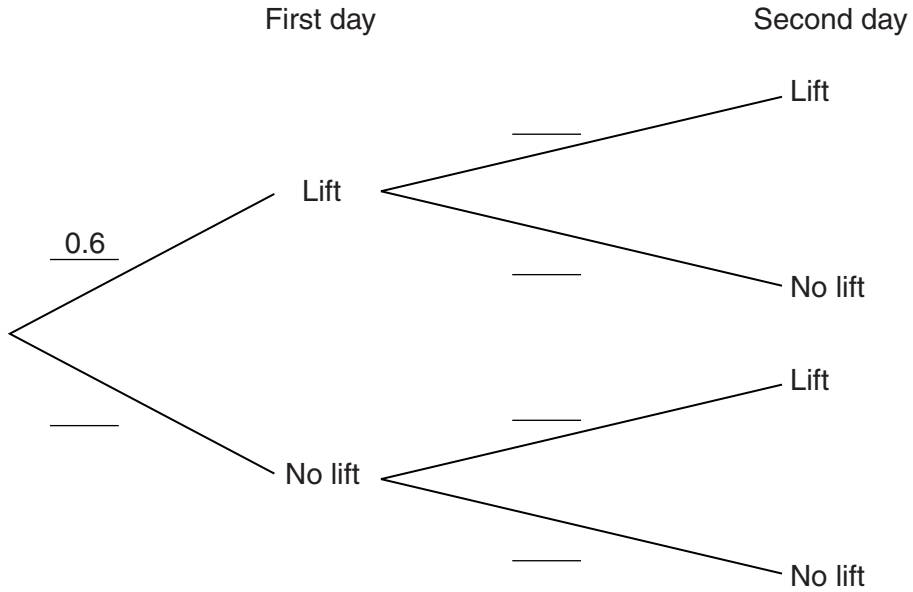
(b) [3]

(c) Calculate the probability that the two counters chosen are **the same colour**.

(c) [3]

5 The probability that Pat gets a lift to school on any day is 0.6.

(a) Complete the tree diagram for two days.



[2]

(b) Work out the probability that Pat gets a lift on just one of the two days.

(b) _____ [3]