

GCSE Mathematics

F

Tree Diagrams

Foundation Tier | Grades 5-7

Total Marks	Time	Questions
40	40 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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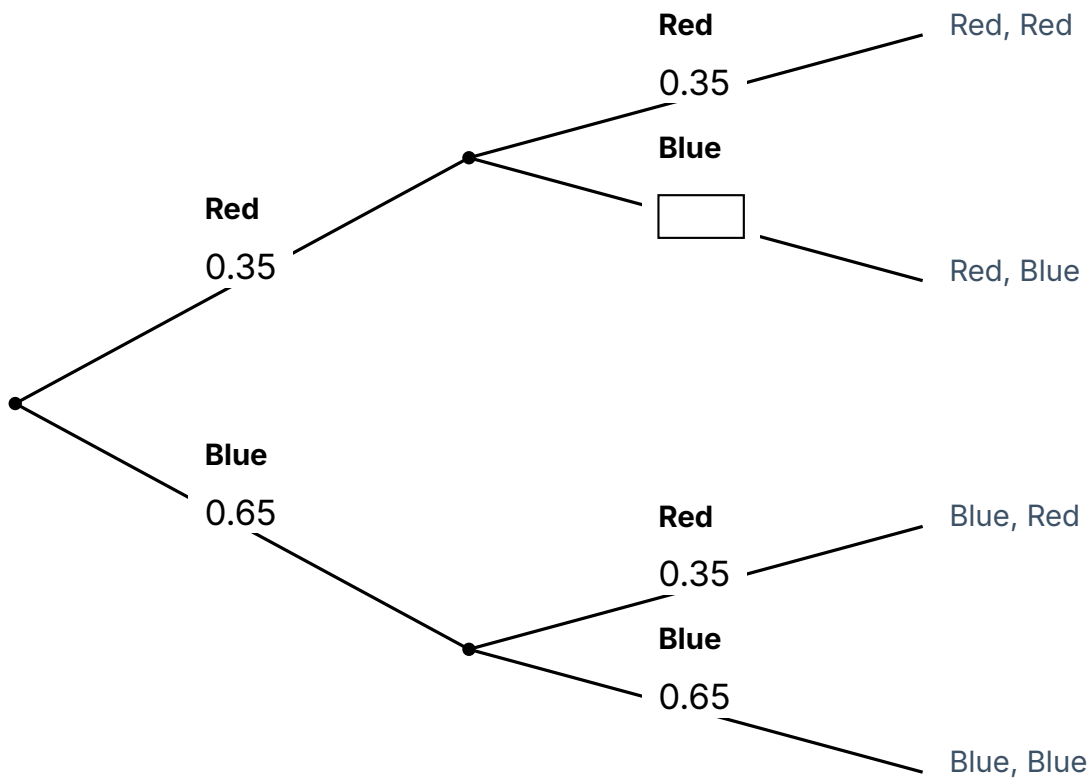
Edexcel-style questions

Q1 

Grade 5

Edexcel style

A spinner can land on red or blue. $P(\text{red}) = 0.35$. The tree diagram shows the spinner spun twice. Find the missing probability.



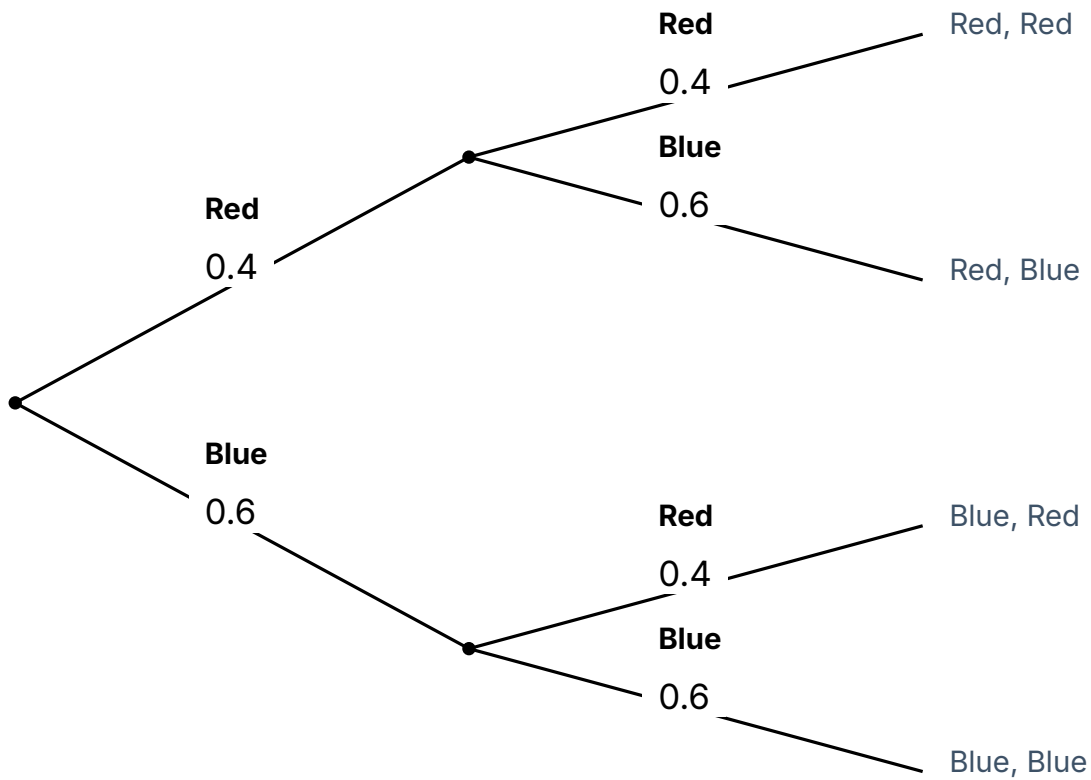
Answer _____

Q2

Grade 5

Edexcel style

A spinner can land on red or blue. $P(\text{red}) = 0.4$. The spinner is spun twice. Use the tree diagram to find the probability of red then red.



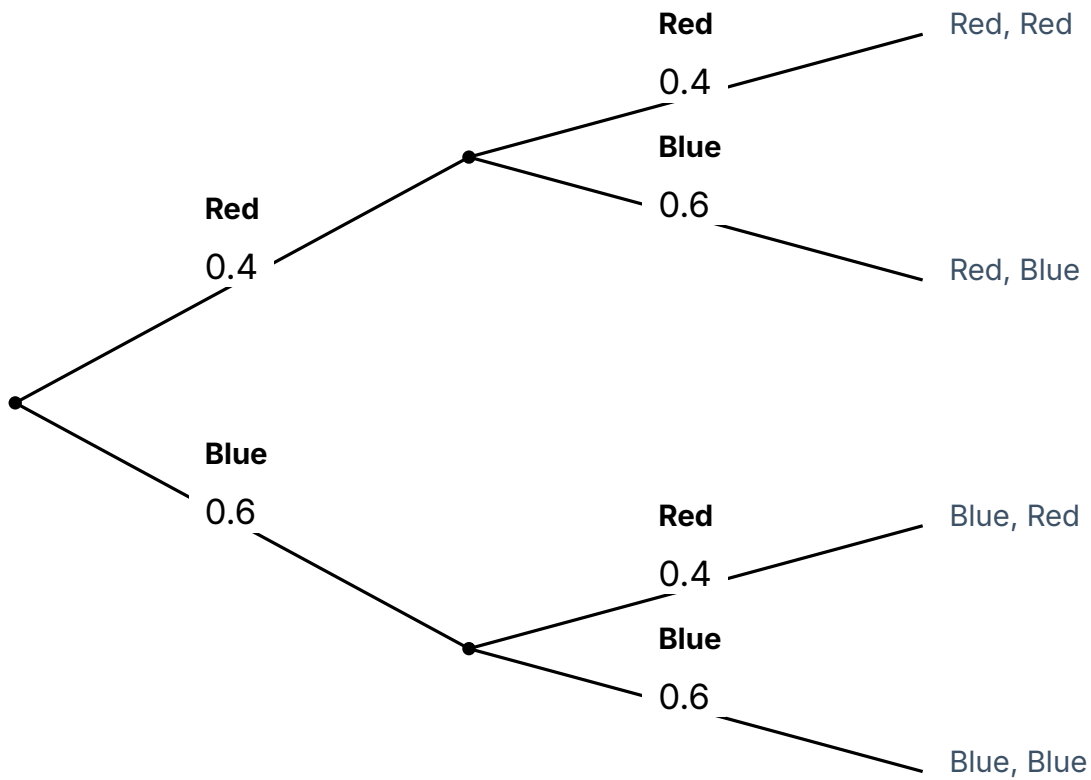
Answer _____

Q3

Grade 6

Edexcel style

A spinner can land on red or blue. $P(\text{red}) = 0.4$. The spinner is spun twice. Use the tree diagram to find the probability of exactly one red.



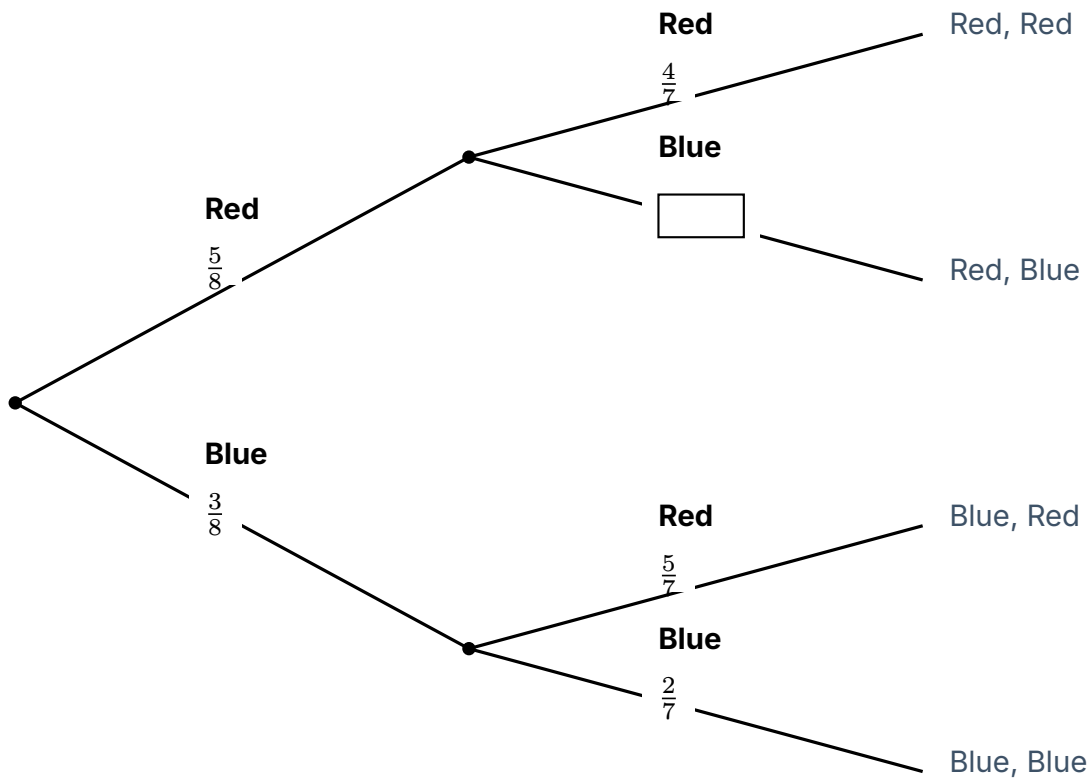
Answer _____

Q4

Grade 7

Edexcel style

A bag contains 5 red and 3 blue counters. Two counters are picked at random, without replacement. Find the missing probability.



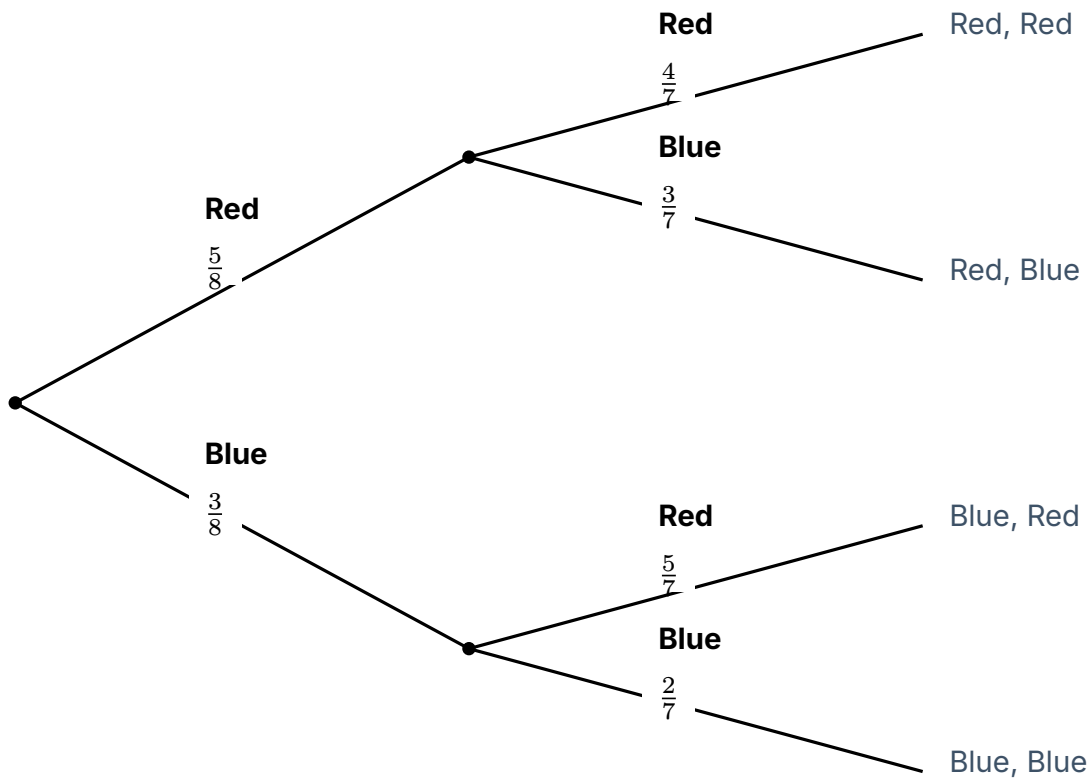
Answer _____

Q5

Grade 7

Edexcel style

A bag contains 5 red and 3 blue counters. Two counters are picked at random, without replacement. Use the tree diagram to find the probability that both are red.



Answer _____

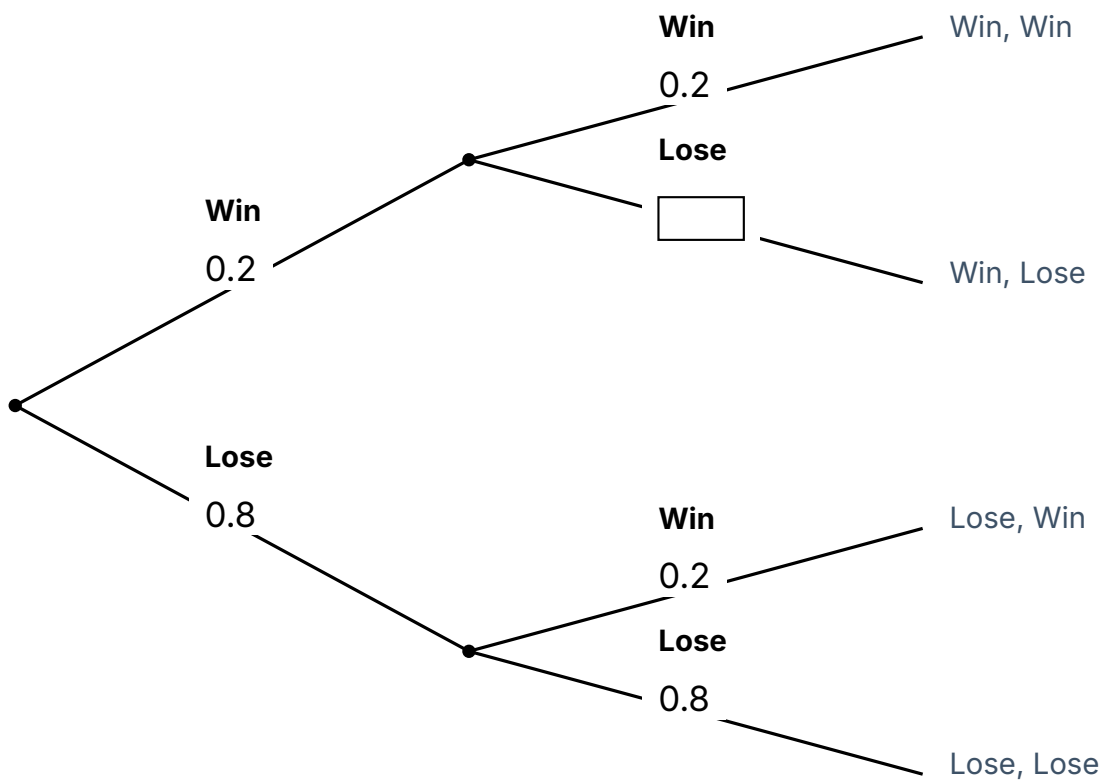
AQA-style questions

Q6 

Grade 5

AQA style

A game can end in a win or a loss. $P(\text{win}) = 0.2$. The tree diagram shows the game played twice. Find the missing probability.



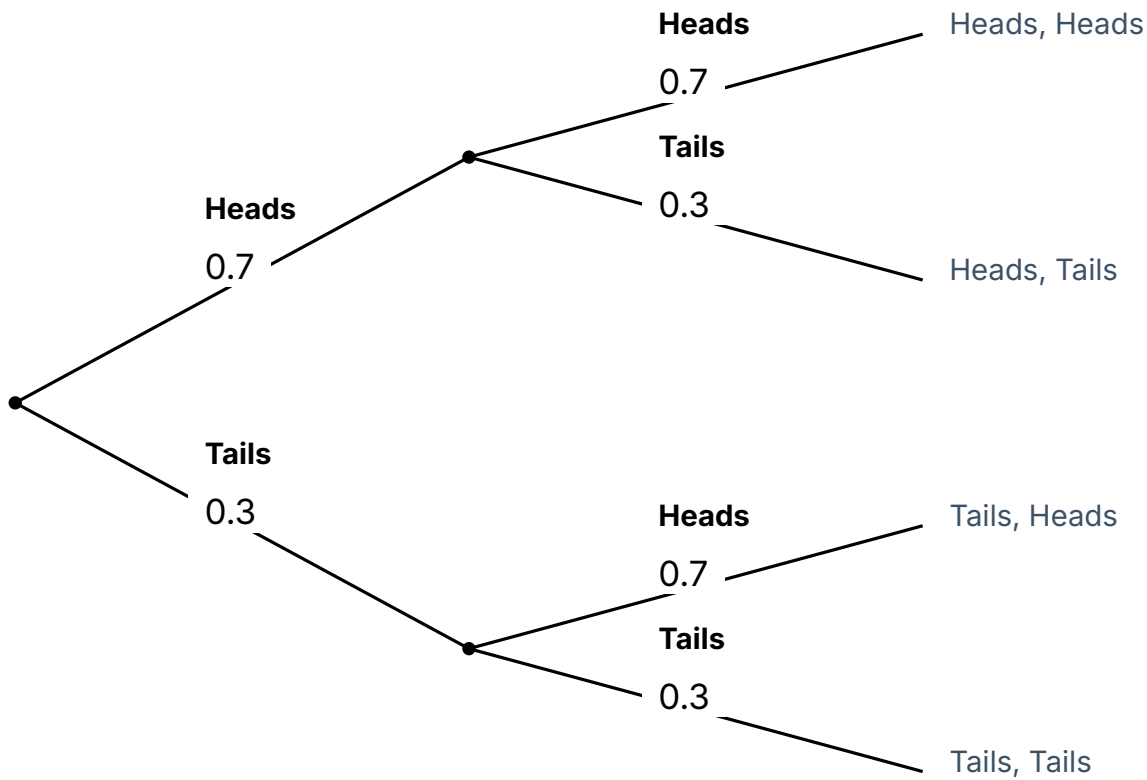
Answer _____

Q7

Grade 6

AQA style

A biased coin has $P(\text{heads}) = 0.7$. The coin is flipped twice. Use the tree diagram to find the probability of heads then heads.



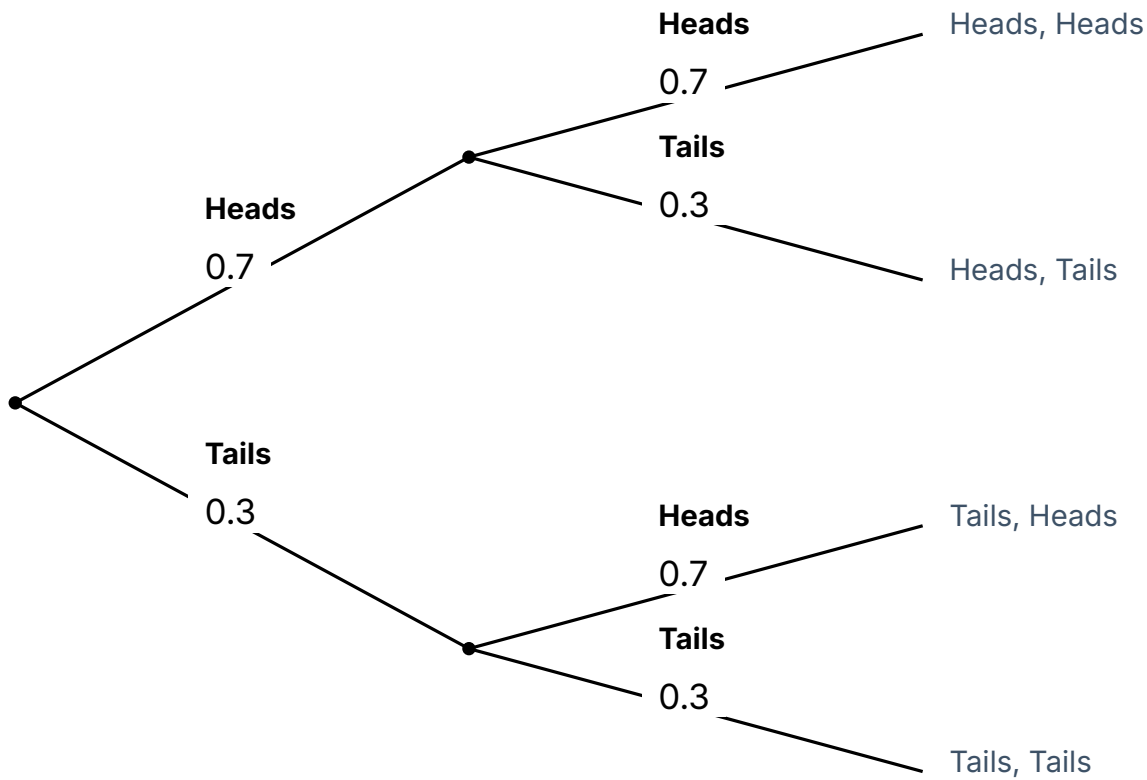
Answer _____

Q8

Grade 6

AQA style

A biased coin has $P(\text{heads}) = 0.7$. The coin is flipped twice. Use the tree diagram to find the probability of exactly one head.



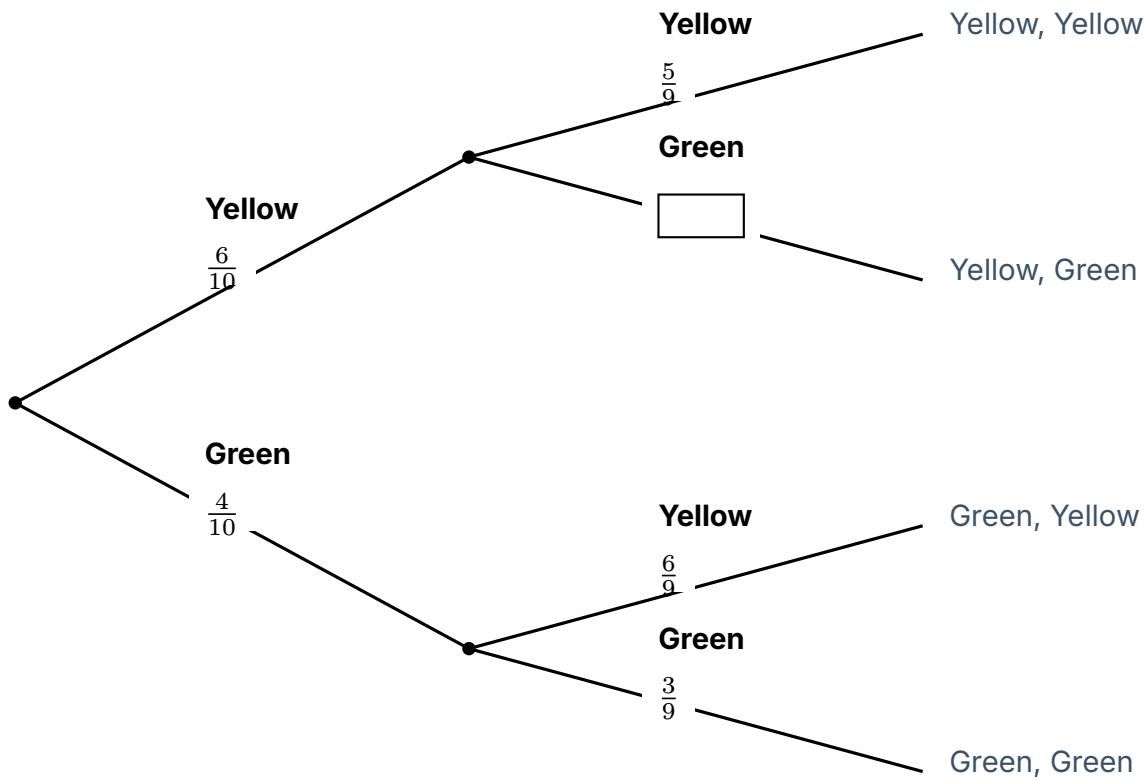
Answer _____

Q9

Grade 7

AQA style

A bag contains 6 yellow and 4 green counters. Two counters are picked at random, without replacement. Find the missing probability.



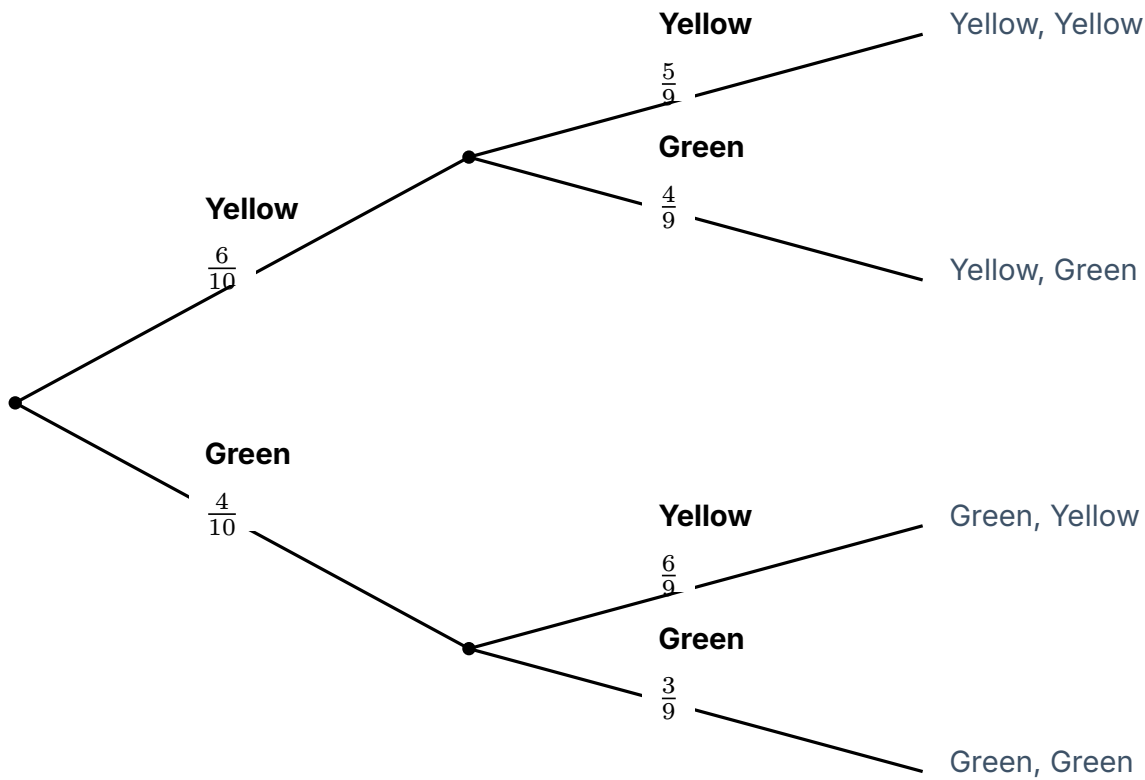
Answer _____

Q10

Grade 7

AQA style

A bag contains 6 yellow and 4 green counters. Two counters are picked at random, without replacement. Use the tree diagram to find the probability that both are yellow.



Answer _____

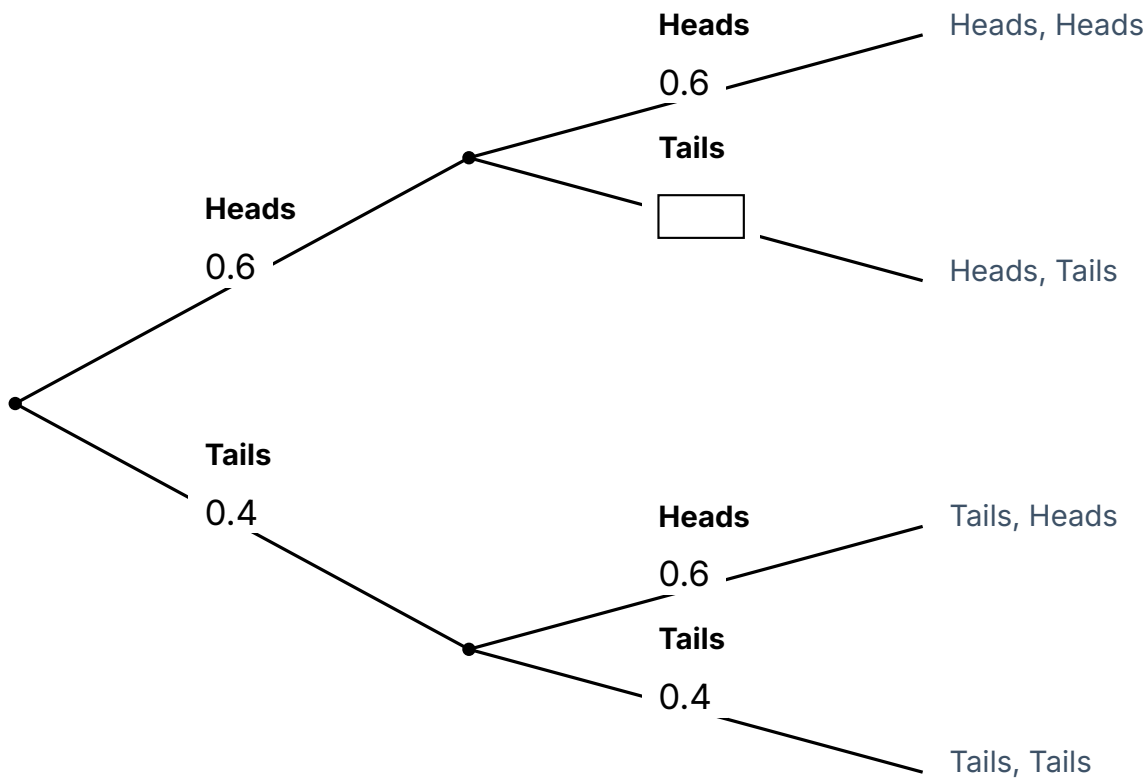
OCR-style questions

Q11 

Grade 5

OCR style

A biased coin has $P(\text{heads}) = 0.6$. The tree diagram shows the coin flipped twice. Find the missing probability.



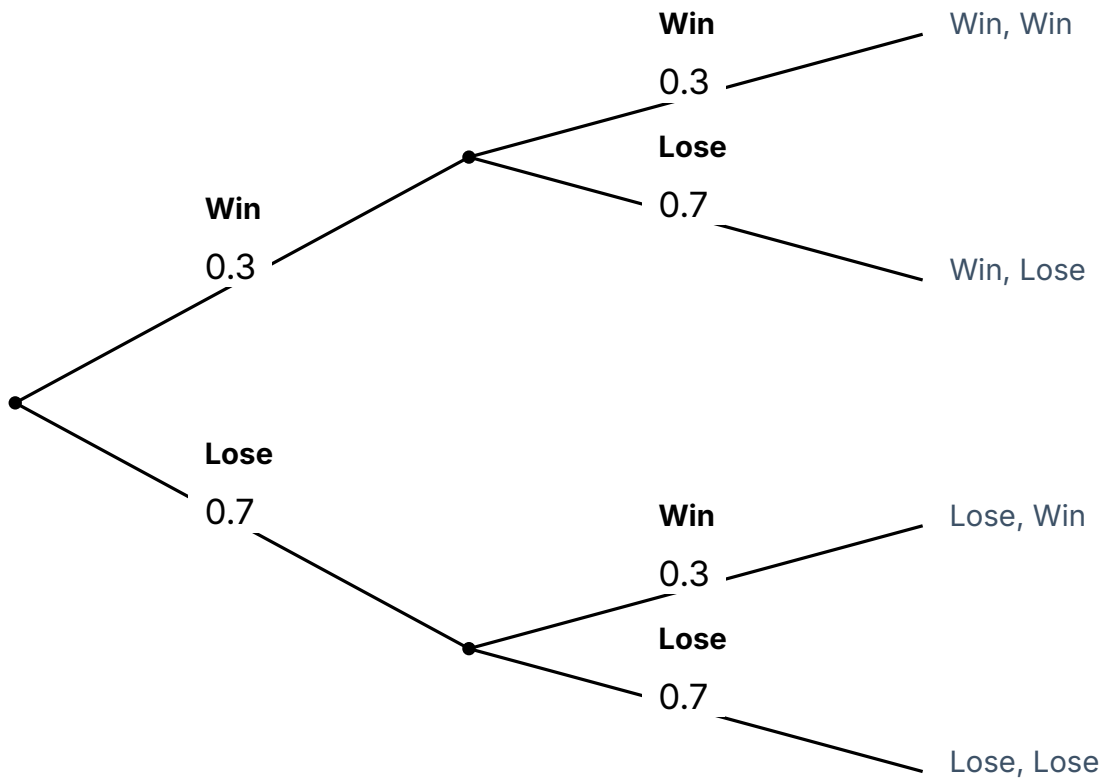
Answer _____

Q12

Grade 6

OCR style

A game can end in a win or a loss. $P(\text{win}) = 0.3$. The game is played twice. Use the tree diagram to find the probability of win then lose.



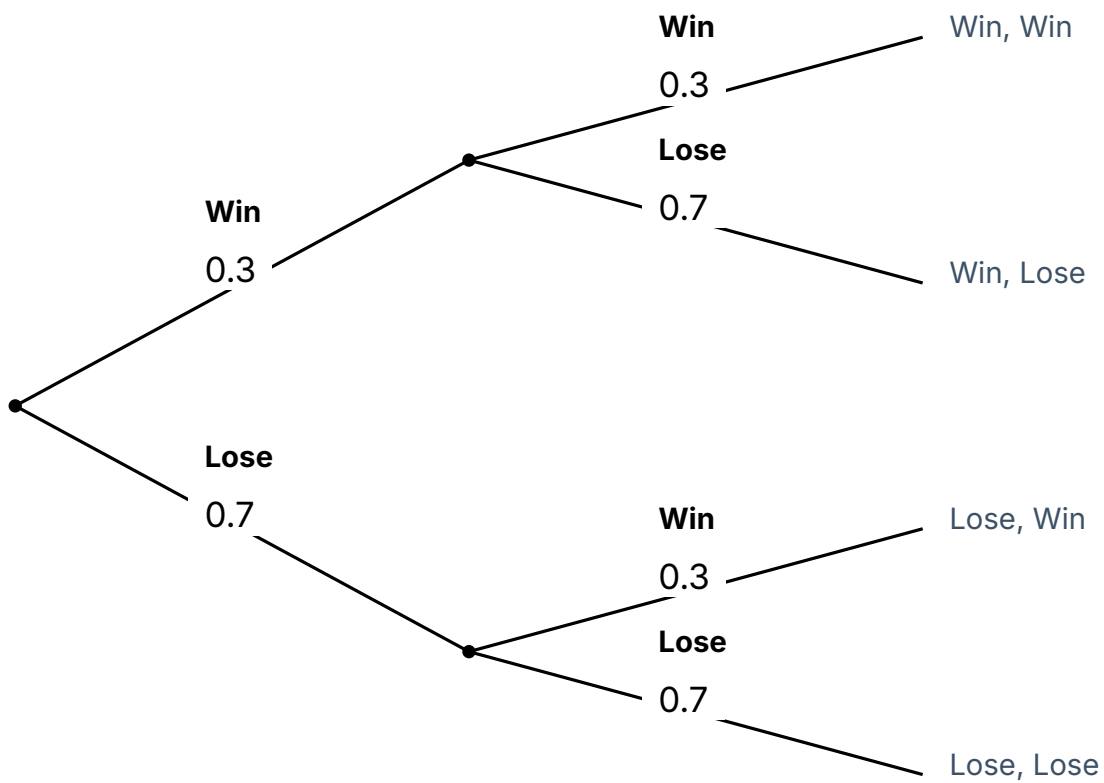
Answer _____

Q13

Grade 6

OCR style

A game can end in a win or a loss. $P(\text{win}) = 0.3$. The game is played twice. Use the tree diagram to find the probability of at least one win.



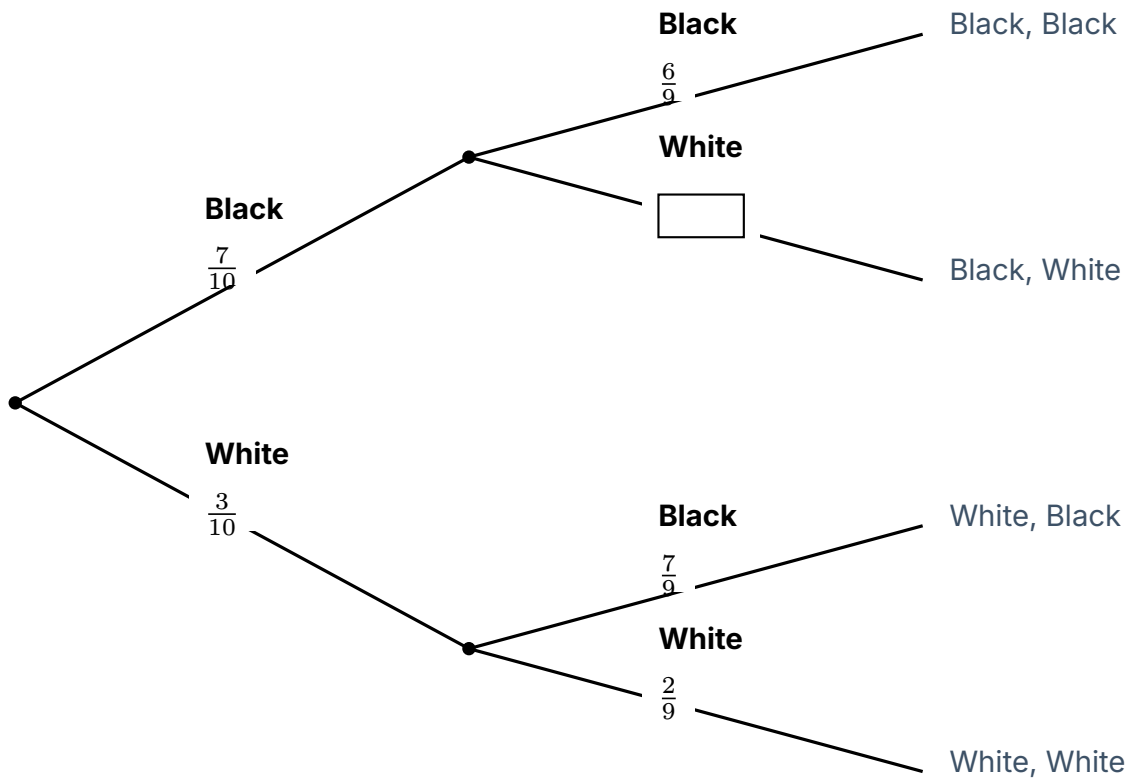
Answer _____

Q14

Grade 7

OCR style

A bag contains 7 black and 3 white counters. Two counters are picked at random, without replacement. Find the missing probability.



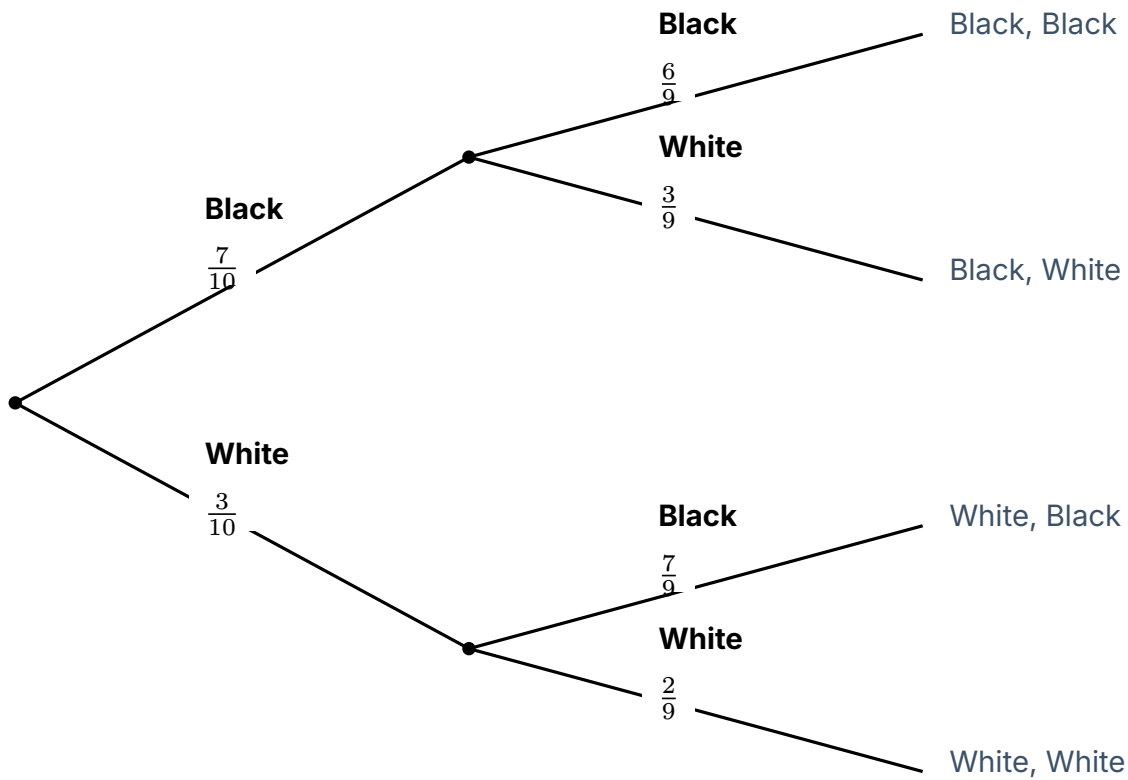
Answer _____

Q15

Grade 7

OCR style

A bag contains 7 black and 3 white counters. Two counters are picked at random, without replacement. Use the tree diagram to find the probability that both are black.



Answer _____

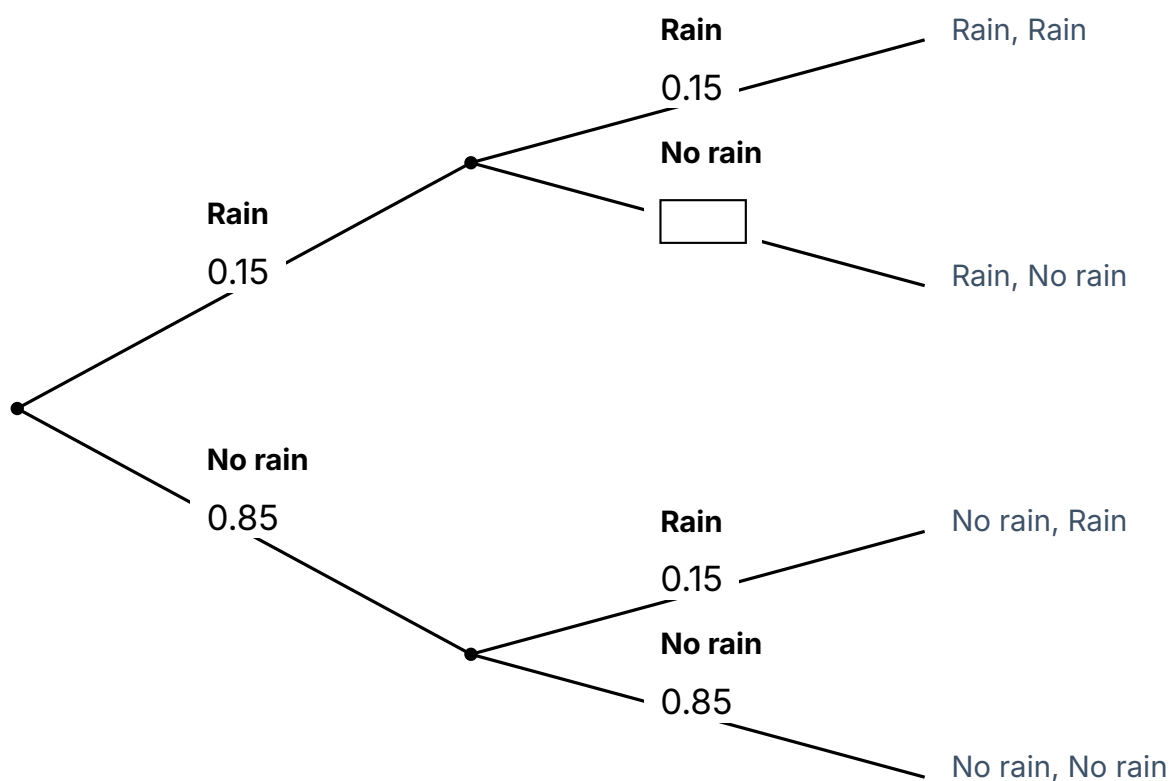
Teachably-style questions

Q16 

Grade 5

Teachably style

The probability that it rains on a given day is 0.15. The tree diagram shows two consecutive days. Find the missing probability.



Answer _____

teachably

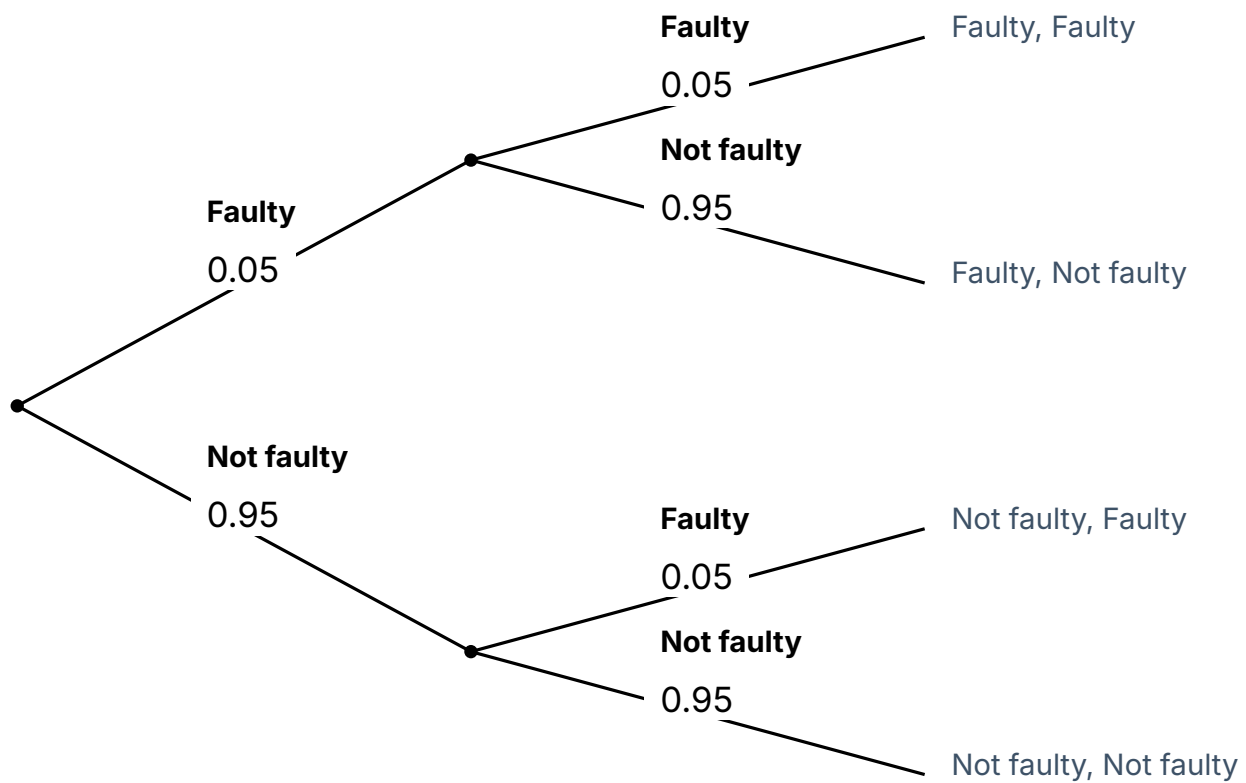
[2 marks]

Q17

Grade 6

Teachably style

The probability that a component is faulty is 0.05. Two components are tested. Use the tree diagram to find the probability that both are faulty.



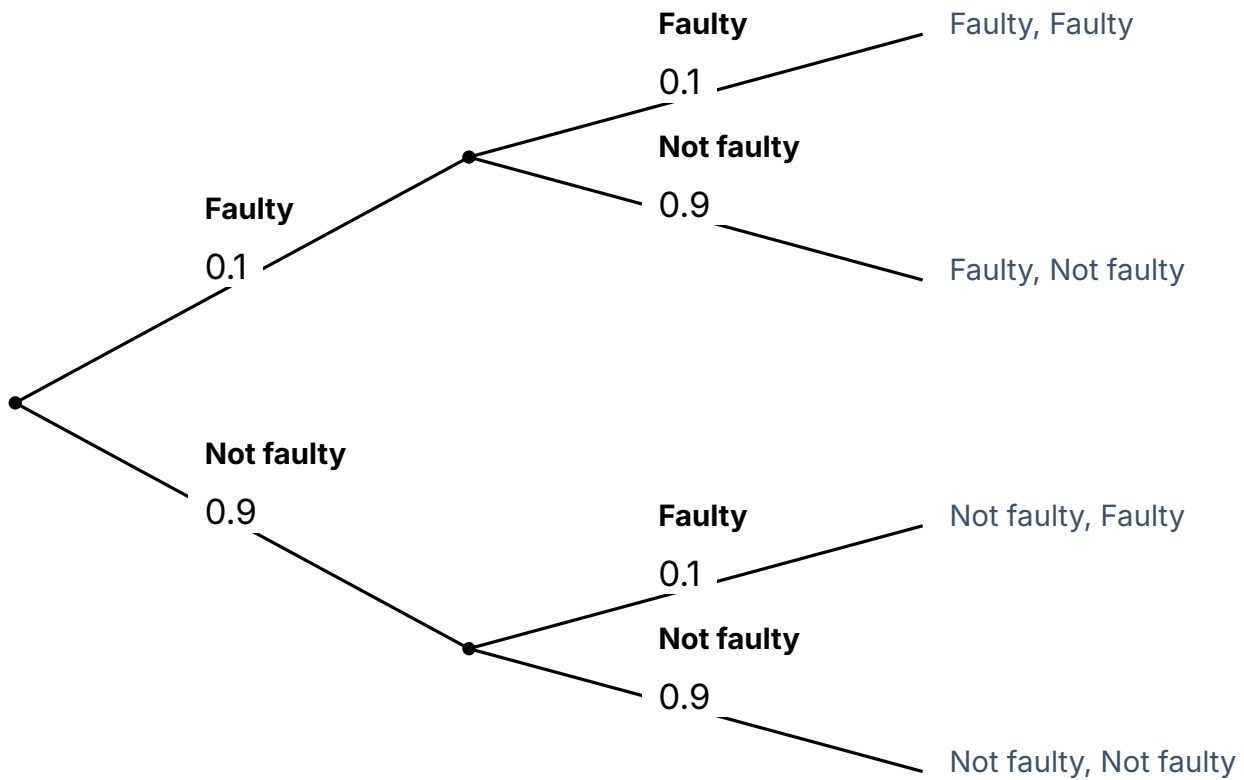
Answer _____

Q18

Grade 6

Teachably style

The probability that a component is faulty is 0.1. Two components are tested. Use the tree diagram to find the probability that exactly one is faulty.



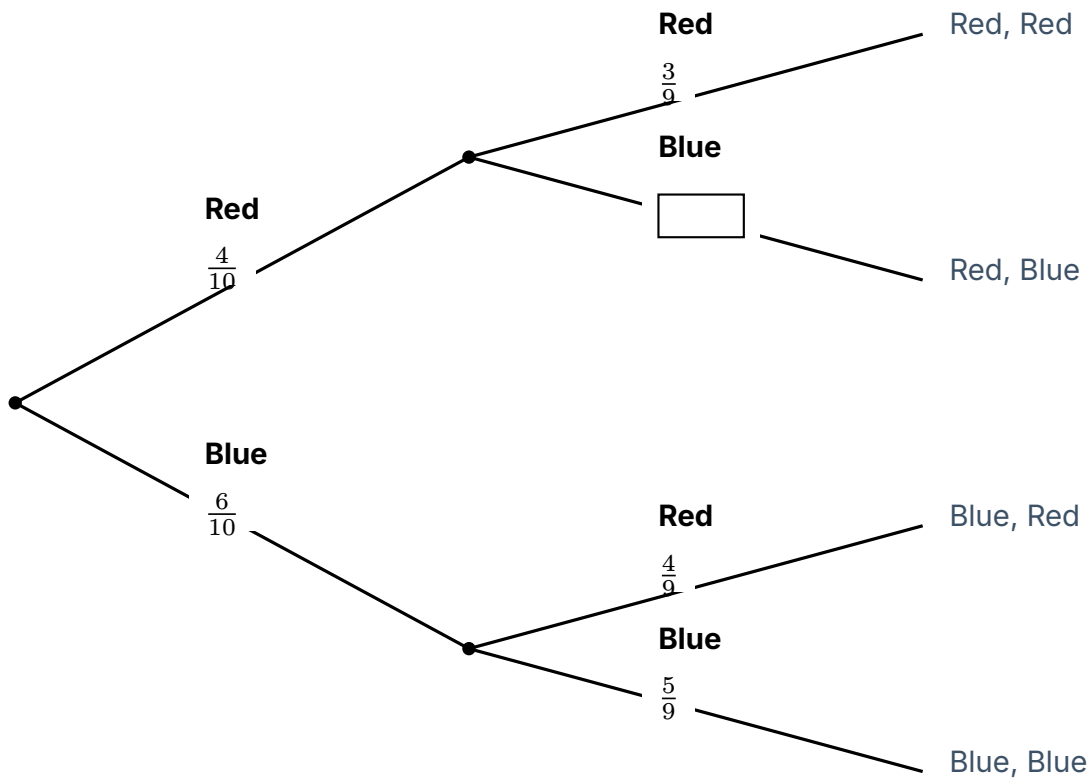
Answer _____

Q19

Grade 7

Teachably style

A bag contains 4 red and 6 blue counters. Two counters are picked at random, without replacement. Find the missing probability.



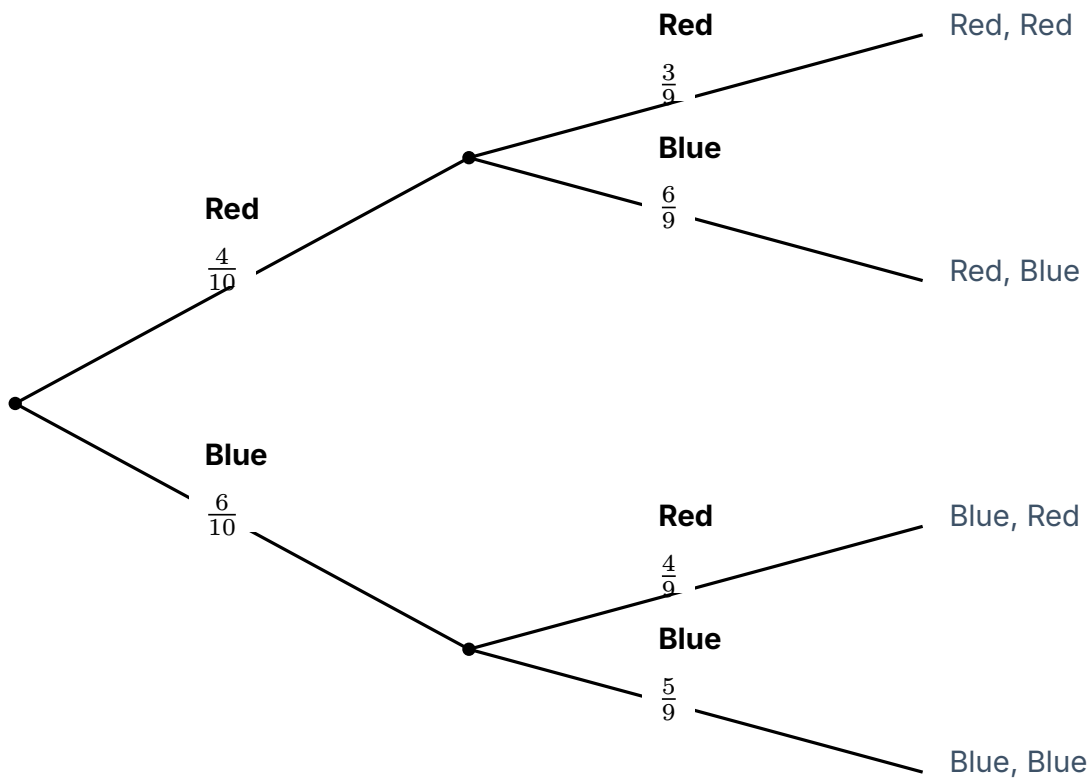
Answer _____

Q20

Grade 7

Teachably style

A bag contains 4 red and 6 blue counters. Two counters are picked at random, without replacement. Use the tree diagram to find the probability of picking one red and one blue, in either order.



Answer _____

END OF PAPER

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