THIRD SPACE LEARNING

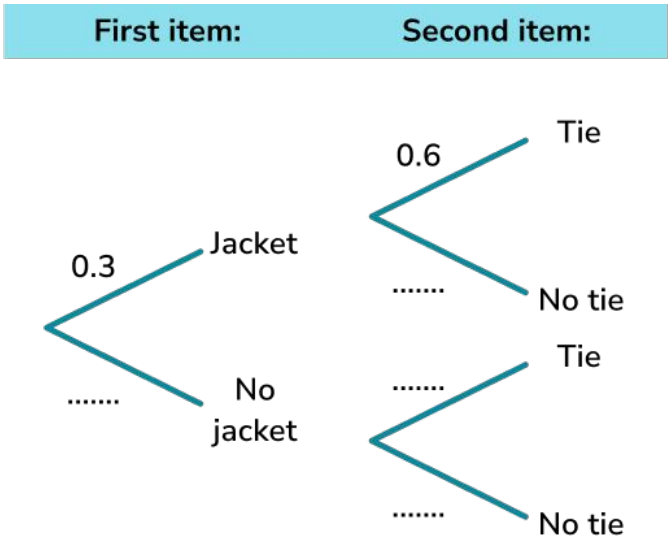
GCSE Exam Questions

Probability Tree Diagrams | Probability

GCSE Exam Questions: Probability Tree Diagrams

1) **(a)** Mr Jamal gets ready in the morning. The probability he wears a jacket is 0.3.
The probability that he wears a tie is 0.6.

Complete the tree diagram.



(2)

(b) Work out the probability that Mr Jones wears a jacket and a tie.

(2)

(4 marks)

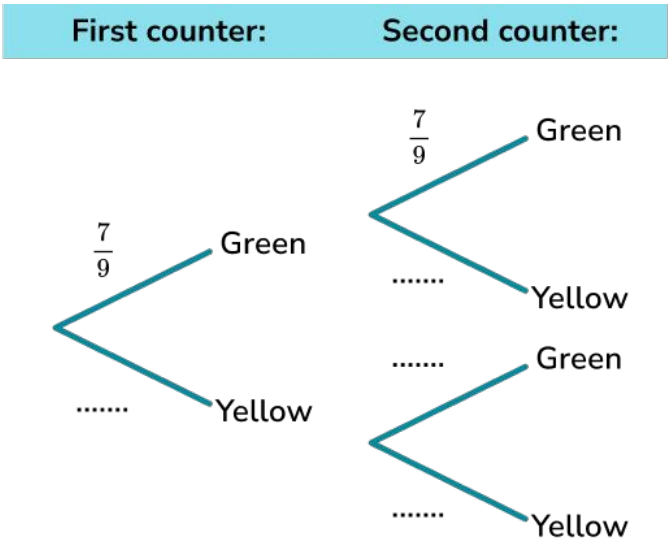
GCSE Exam Questions: Probability Tree Diagrams

2) **(a)** A bag contains only green and yellow counters.

Sophie picks a counter at random and then replaces it.

Sophie then picks a second counter.

Complete the tree diagram.



(2)

(b) Work out the probability that Sophie picks 2 green counters.

(2)

(c) Work out the probability that Sophie picks at least one green counter.

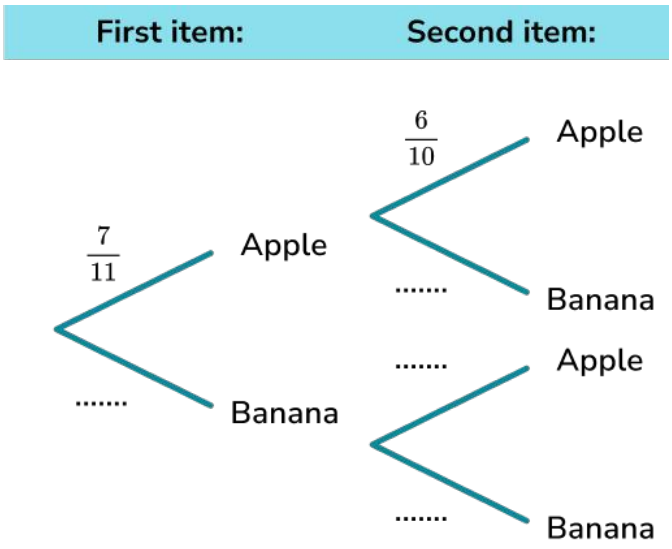
(2)

(6 marks)

GCSE Exam Questions: Probability Tree Diagrams

3) **(a)** There are 7 apples and 4 bananas in a fruit bowl. A piece of fruit is selected at random. It is eaten. A second piece of fruit is selected at random and is also eaten.

Complete the tree diagram.



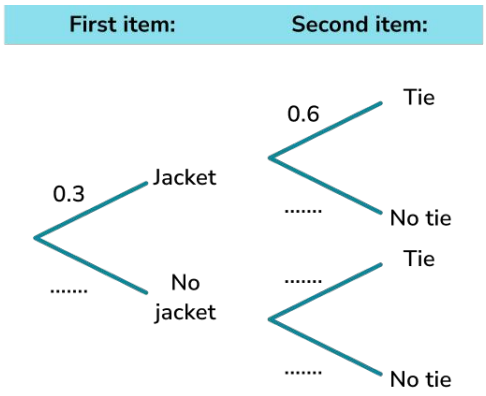
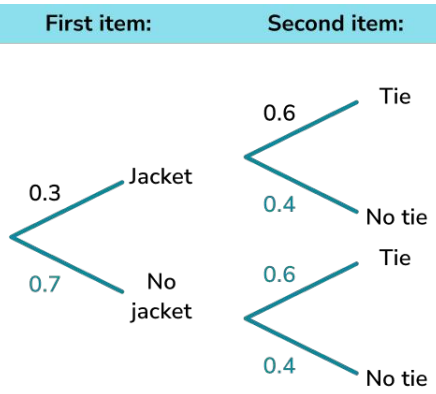
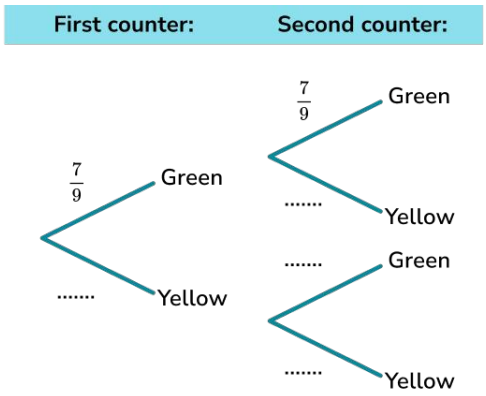
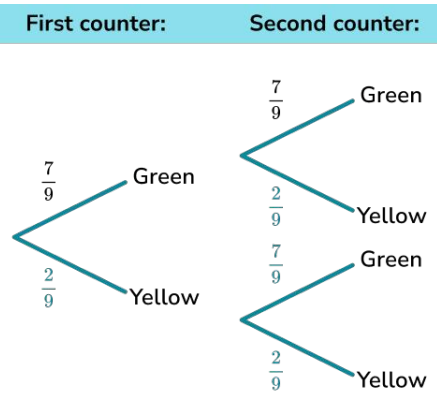
(2)

(b) Work out the probability that one of each type of fruit is eaten.

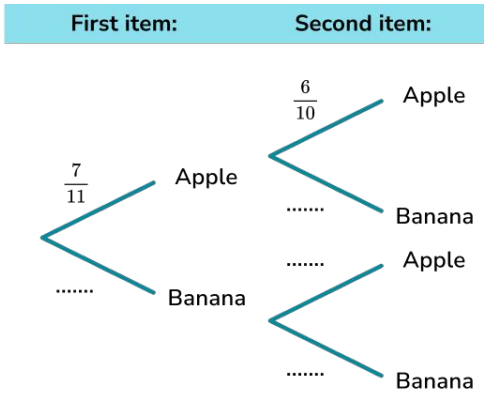
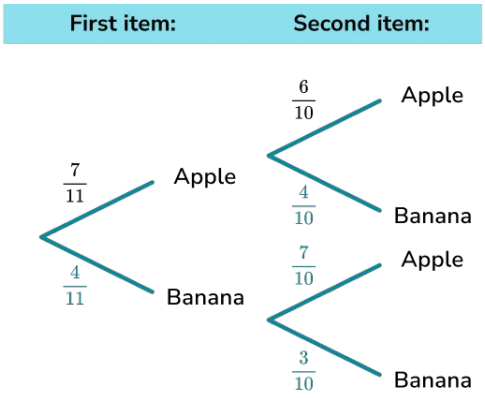
(3)

(5 marks)

GCSE Exam Questions: Probability Tree Diagrams Answers

	Question	Answer	Marks
1) (a)	Mr Jamal gets ready in the morning. The probability he wears a jacket is 0.3. The probability that he wears a tie is 0.6. Complete the tree diagram. 	**(a)**  0.7 on the first set on branches 0.4, 0.6, 0.4 on the second set of branches	 **(1)** **(1)**
(b)	Work out the probability that Mr Jones wears a jacket and a tie.	**(b)** 0.3×0.6 $= 0.18$	**(1)** **(1)**
2) (a)	A bag contains only green and yellow counters. Sophie picks a counter at random and then replaces it. Sophie then picks a second counter. Complete the tree diagram. 	**(a)**  $\frac{2}{9}$ on the first set on branches $\frac{2}{9}, \frac{7}{9}, \frac{2}{9}$ on the second set of branches	 **(1)** **(1)**
(b)	Work out the probability that Sophie picks 2 green counters.	**(b)** $\frac{7}{9} \times \frac{7}{9}$ $= \frac{49}{81}$	**(1)** **(1)**
(c)	Work out the probability that Sophie picks at least one green counter.	**(c)** $\left(\frac{7}{9} \times \frac{7}{9}\right) + \left(\frac{7}{9} \times \frac{2}{9}\right) + \left(\frac{2}{9} \times \frac{7}{9}\right)$ $= \frac{49}{81} + \frac{14}{81} + \frac{14}{81} = \frac{77}{81}$	**(1)** **(1)**

GCSE Exam Questions: Probability Tree Diagrams Answers

	Question	Answer	Marks
3) (a)	There are 7 apples and 4 bananas in a fruit bowl. A piece of fruit is selected at random. It is eaten. A second piece of fruit is selected at random and is also eaten. Complete the tree diagram.  	**(a)**  $\frac{4}{11}$ on the first set on branches $\frac{4}{10}, \frac{7}{10}, \frac{3}{10}$ on the second set of branches	 **(1)** **(1)**
(b)	Work out the probability that one of each type of fruit is eaten.	**(b)** $\frac{7}{11} \times \frac{4}{10} = \frac{28}{110}$ **or** $\frac{4}{11} \times \frac{7}{10} = \frac{28}{110}$ $"\frac{28}{110}" + "\frac{28}{110}"$ $= \frac{56}{110}$ **oe**	**(1)** **(1)** **(1)**

Where to go next?

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