THIRD SPACE LEARNING

GCSE Exam Questions

How to Calculate Probability | Probability

GCSE Exam Questions: How to Calculate Probability

1) **(a)** The table below shows the probability of landing on a particular number on a biassed spinner.

1	2	3	4
0.2	0.3		0.15

Work out the probability of landing on a 3.

(2)

(b) What is the probability of landing on a 2 or a 4?

(2)

(4 marks)

2) Aled has 10 cards numbered 1-10.

He designs a game in which a player wins if they pick the number 1 or a multiple of 5.

Aled charges £2 to play the game.

Winning players receive £4.

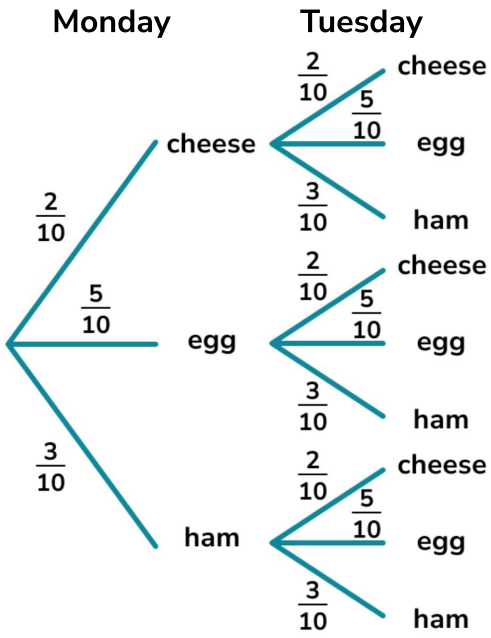
200 people play the game.

How much profit would Aled expect to make?

(4)

GCSE Exam Questions: How to Calculate Probability

3) The tree diagram shows the probability that Gary chooses each type of sandwich over two days.

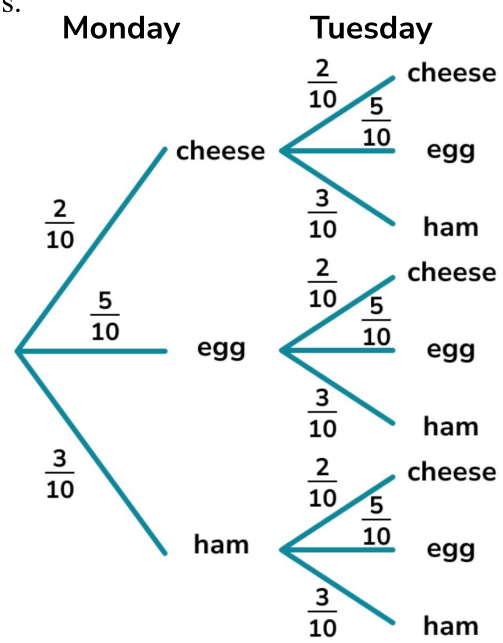


Find the probability he has different sandwiches on Monday and Tuesday.

(2)

(2 marks)

GCSE Exam Questions: How to Calculate Probability Answers

	Question	Answer	Marks
1) (a)	The table below shows the probability of landing on a particular number on a biassed spinner. | 1 | 2 | 3 | 4 | | 0.2 | 0.3 | | 0.15 | Work out the probability of landing on a 3.	**(a)** 1- (0.2 + 0.3 + 0.15) = 0.35	**(1)** **(1)**
(b)	What is the probability of landing on a 2 or a 4?	**(b)** 0.3 + 0.15 = 0.45	**(1)** **(1)**
2)	Aled has 10 cards numbered 1-10. He designs a game in which a player wins if they pick the number 1 or a multiple of 5. Aled charges £2 to play the game. Winning players receive £4. 200 people play the game. How much profit would Aled expect to make?	P(win) = $\frac{3}{10}$ Expected number of winners: $\frac{3}{10} \times 200 = 60$ 60 × £4 = £240 £400 - £240 = £160	**(1)** **(1)** **(1)** **(1)**
3)	The tree diagram shows the probability that Gary chooses each type of sandwich over two days.  Find the probability he has different sandwiches on Monday and Tuesday.	P(cheese and cheese) = $\frac{4}{100}$ **or** P(egg and egg) = $\frac{25}{100}$ **or** P(ham and ham) = $\frac{9}{100}$ $\frac{4}{100}$ **and** $\frac{25}{100}$ **and** $\frac{9}{100}$ **Alternative method** P(two different) $= 1 - \frac{4}{100} - \frac{25}{100} - \frac{9}{100}$ P(two different) = $\frac{62}{100}$	**(1)** **(1)** **(1)** **(1)**

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