

Probability

ANSWERS

Calculator | 30 minutes | Total marks: 24

Name _____ Class _____

1 Write one phrase from the box next to each event.

impossible

unlikely

even chance

likely

certain

A fair coin lands on tails.

even chance (1)

You roll an 8 on an ordinary dice.

impossible (1)

The day after Monday is Tuesday.

certain (1)

[3 marks]

2 A fair spinner has 5 equal sections. 2 are red, 2 are blue and 1 is green.

(a) Write the probability of red as a fraction.

Answer $\frac{2}{5}$ (1)

[1 mark]

(b) Write the probability of red as a decimal.

Answer 0.4 (1)

[1 mark]

(c) Write the probability of red as a percentage.

Answer 40 (1)

%

[1 mark]

(d) Write down the probability that the spinner does not land on green.

Answer $\frac{4}{5}$ (1)

[1 mark]

3 The probability that it rains tomorrow is 0.35

Write down the probability that it does not rain tomorrow.

Answer 0.65 (1)

[1 mark]

4

A café has 2 starters and 3 main courses.

Starters: soup, salad Main courses: fish, pasta, curry

List all the possible meals of one starter and one main course.

soup fish, soup pasta, soup curry (1)
salad fish, salad pasta, salad curry (1)

[2 marks]

5

A fair coin is thrown and a fair dice is rolled.

(a) Complete the sample space diagram.

	1	2	3	4	5	6
Head	H1	H2	<i>H3</i>	<i>H4</i>	<i>H5</i>	<i>H6</i>
Tail	T1	<i>T2</i>	<i>T3</i>	<i>T4</i>	<i>T5</i>	<i>T6 (1)(1)</i>

[2 marks]

(b) Write down the probability of getting a head and an even number.

Answer $\frac{3}{12}$ (1)

[1 mark]

6

The probability of winning a game is $\frac{1}{4}$

The game is played 80 times.

Work out how many wins you would expect.

80 ÷ 4 (1)

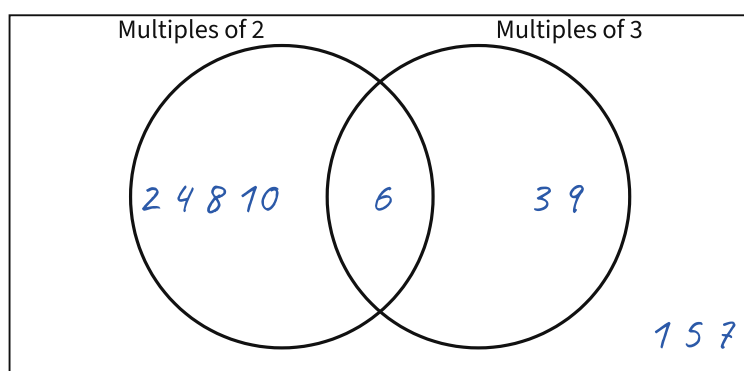
Answer 20 (1)

[2 marks]

7

The numbers 1 to 10 are sorted into a Venn diagram.

(a) Write each number from 1 to 10 in the correct part of the diagram.



6 in the middle (1)
 2, 4, 8, 10 and 3, 9 (1)
 1, 5, 7 outside (1)

[3 marks]

(b) One of the numbers is chosen at random.

Write down the probability that it is a multiple of 2 and a multiple of 3

Answer $\frac{1}{10}$ (1)

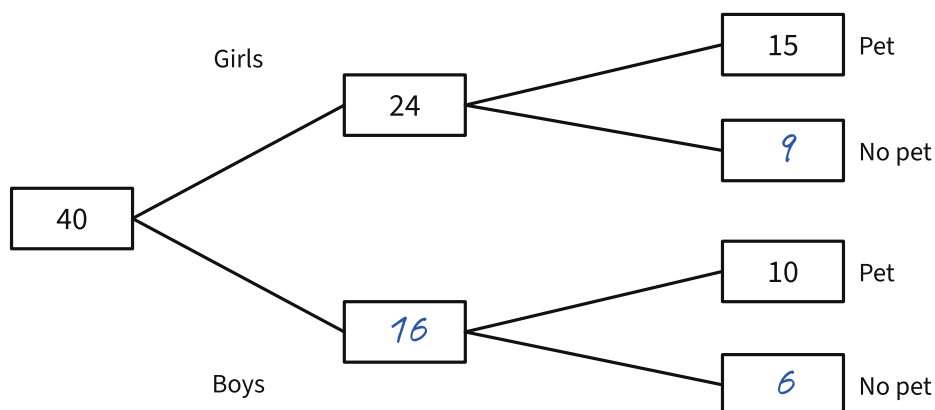
[1 mark]

8

There are 40 students in a year group. 24 are girls.

15 girls have a pet and 10 boys have a pet.

(a) Complete the frequency tree.



1 mark for each correct number

[3 marks]

(b) A student is chosen at random.

Write down the probability that the student has a pet.

Answer $\frac{25}{40}$ (1)

[1 mark]

9

A coin is thrown 100 times. It lands on heads 82 times.

Do you think the coin is fair?

Give a reason for your answer.

No, a fair coin would land on heads about 50 times (1)

[1 mark]

Question	Topic	RAG
1	I can describe probability in words	
2	I can write a probability as a fraction, decimal and percentage	
3	I can find the probability of an event not happening	
4	I can list outcomes	
5	I can use a sample space diagram	
6	I can work out an expected number	
7	I can sort data into a Venn diagram	
8	I can use a frequency tree	
9	I can spot bias	