

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

The sun will rise tomorrow.

certain (1)

You roll a 7 on an ordinary dice.

impossible (1)

A fair coin lands on heads.

even chance (1)

[3 marks]

2 A bag contains 2 red counters, 3 blue counters and 5 green counters.

One counter is taken at random. Write down the probability that it is

(a) red

Answer $\frac{2}{10}$ (1) [1 mark]

(b) green

Answer $\frac{5}{10}$ (1) [1 mark]

(c) not red

Answer $\frac{8}{10}$ (1) [1 mark]

(d) yellow

Answer 0 (1) [1 mark]

3

- (a) The probability that it rains tomorrow is 0.3

Write down the probability that it does not rain tomorrow.

Answer 0.7 (1)

[1 mark]

- (b) The probability that Jo wins a game is
- $\frac{1}{4}$

Write down the probability that Jo does not win.

Answer $\frac{3}{4}$ (1)

[1 mark]

4

A fair coin is thrown and a fair spinner with the colours red, blue and green is spun.

- (a) List all the possible outcomes. One has been done for you.

head, red

*head blue, head green (1)**tail red, tail blue, tail green (1)*

[2 marks]

- (b) Write down the probability of getting a head and red.

Answer $\frac{1}{6}$ (1)

[1 mark]

5

A fair spinner with the numbers 1, 2 and 3 is spun twice. The two numbers are added.

- (a) Complete the table of totals.

+	1	2	3
1	2	3	4
2	3	4	5
3	4	5	6 (1)(1)

[2 marks]

- (b) Write down the probability that the total is 4

Answer $\frac{3}{9}$ (1)

[1 mark]

- 6 The probability that a spinner lands on red is $\frac{1}{5}$

The spinner is spun 50 times.

Work out how many times you would expect it to land on red.

$$50 \div 5 \text{ (1)}$$

Answer 10 (1)

[2 marks]

- 7 A spinner is spun 40 times. The table shows the results.

Colour	red	blue	green
Frequency	12	18	10

- (a) Which colour did the spinner land on most often?

Answer blue (1)

[1 mark]

- (b) Write down the relative frequency of blue.

Answer $\frac{18}{40}$ (1)

[1 mark]

- 8 The two way table shows the favourite pet of 20 students.

	Cat	Dog	Total
Boys	4	6	10
Girls	7	3	10
Total	11	9	20

A student is chosen at random. Write down the probability that the student

- (a) is a girl

Answer $\frac{10}{20}$ (1)

[1 mark]

- (b) chose dog

Answer $\frac{9}{20}$ (1)

[1 mark]

- (c) is a boy who chose cat

Answer $\frac{4}{20}$ (1)

[1 mark]

9

A game can be won, drawn or lost.

The probability of a win is 0.5 and the probability of a draw is 0.2

Work out the probability of a loss.

$$1 - 0.5 - 0.2 \text{ (1)}$$

Answer 0.3 (1)

[2 marks]

Question	Topic	RAG
1	I can describe probability in words	
2	I can write a probability as a fraction	
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 use the results of an experiment	
8	I can find probabilities from a two way table	
9	I know that probabilities add up to 1	