Expected Outcomes

1

The probability that a fair dice lands on 4 is $\frac{1}{6}$. The dice is rolled 48 times.

How many times would you expect it to land on 4?

expected = probability × number of trials

$\frac{1}{6}$ × 48 = ☐

probability trials expected

Answer _____

2

The probability that a rose cutting grows roots is $\frac{3}{4}$. Priya plants 36 cuttings.

How many would you expect to grow roots?

$\frac{3}{4}$ × ☐ = ☐

probability trials expected

Answer _____

3

The probability that a phone battery is faulty is 0.04. A factory makes 900 batteries. How many would you expect to be faulty?

☐ × ☐ = ☐

probability trials expected

Answer _____

4

The probability that a student at a school is left handed is 12%. The school has 650 students. How many would you expect to be left handed?

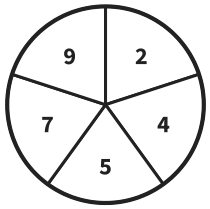
☐ × ☐ = ☐

probability trials expected

Answer _____

5

This fair spinner is spun 120 times.
How many times would you expect it to land on an even number?



_____

Answer _____

6

Sam throws a paper cup 50 times.
It lands on its side 32 times.
Estimate how many times it would land on its side in 400 throws.

_____

Answer _____

7

At a school fair, a lucky dip costs £1 a go. The probability of winning a £5 prize is $\frac{1}{8}$. 200 people have a go.

How much profit would the school expect to make?

_____

Answer _____

8

The probability that a train is late is 0.1. 70 trains run on Monday. Ruby works out how many trains she would expect to be on time. She says 7. Explain what Ruby has done wrong. Then find the right answer.

_____

Answer _____

Expected Outcomes *further practice*

9

The probability that a customer at a café pays by card is $\frac{7}{8}$.

320 customers visit the café.
How many would you expect to pay by card?

Answer _____

10

The probability that a flight is delayed is 8%. An airport has 450 flights on Friday. How many would you expect not to be delayed?

Answer _____

11

A spinner can land on red, blue or green. It is spun 80 times.
How many times would you expect it to land on green?

Colour	Red	Blue	Green
Probability	0.3	0.45	

Answer _____

12

Leah spins a spinner 60 times.
Her results are in the table.
Estimate how many times it would land on 3 in 500 spins.

Number	1	2	3
Frequency	12	21	27

Answer _____

13

Zainab plays a game 60 times.
The probability that she wins is 0.35.
Tomasz plays a different game 64 times.
The probability that he wins is $\frac{3}{8}$.
Who would you expect to win more games? Show how you know.

Zainab _____

Tomasz _____

Answer _____

14

A charity game costs £2 a go.
The probability of winning £10 is 0.15.
120 people play. Would the charity expect to make a profit?
Show how you know.

Answer _____

15

Ola rolls a fair dice. She expects to get 35 sixes. How many times does she plan to roll the dice?

Answer _____

16

Kwame flips a coin 50 times and gets 31 heads. He says, "I expected 25 heads, so the coin must be biased."
Is he right? Explain.

Answer _____