

Expected Outcomes

ANSWERS 

1

The probability of winning a game is $\frac{1}{4}$. The game is played 80 times. How many wins would you expect?

Out of	Expect
4	1
80	20

$\times 20$

Answer 20 wins

2

The probability a spinner lands on red is $\frac{2}{5}$. It is spun 50 times. How many reds would you expect?

Out of	Expect
5	2
50	20

$\times 10$

Answer 20 reds

3

The probability of rolling a six is $\frac{1}{6}$. A dice is rolled 120 times. How many sixes would you expect?

Out of	Expect
6	1
120	20

$\times 20$

Answer 20 sixes

4

The probability a seed grows is $\frac{7}{10}$. 200 seeds are planted. How many would you expect to grow?

Out of	Expect
10	7
200	140

$\times 20$

Answer 140 seeds

5

The probability a bus is late is 0.2. There are 50 buses. How many would you expect to be late?

$$0.2 \times 50$$

Answer 10 buses

6

The probability a ticket wins is 0.35. 400 tickets are sold. How many winning tickets would you expect?

$$0.35 \times 400$$

Answer 140 tickets

7

The probability of picking a blue bead is $\frac{3}{8}$. A bead is picked 240 times. How many blues would you expect?

$$\frac{3}{8} \times 240$$

Answer 90 blues

8

A drawing pin lands point up 13 times in 20 throws. How many times would you expect it to land point up in 300 throws?

$$\frac{13}{20} \times 300$$

Answer 195 times

Expected Outcomes *further practice*

ANSWERS 

9

The probability that a customer at a bakery buys a loaf is $\frac{3}{8}$. 240 customers visit the bakery on Monday. How many of them would you expect to buy a loaf?

Out of	Expect
8	3
240	90

$\times 30$

Answer 90 customers

10

The probability that a train is late is 12%. 450 trains run in a week. How many of them would you expect to be late?

Out of	Expect
100	12
450	54

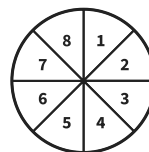
$\times 4.5$

$$12\% = 12 \text{ out of } 100$$

Answer 54 trains

11

This fair spinner is spun 200 times. How many times would you expect it to land on a number greater than 5?



$$\frac{3}{8} \times 200 = 75$$

Answer 75 times

12

In April, the probability that it rains on any one day is 0.3. April has 30 days. On how many days in April would you expect it not to rain?

$$1 - 0.3 = 0.7, \text{ and } 0.7 \times 30 = 21$$

Answer 21 days

13

The probability that a customer buys a carrier bag is 0.15. On Saturday a shop expects 42 customers to buy a carrier bag. How many customers does the shop expect on Saturday?

Out of	Expect
100	15
280	42

$\times 2.8$

$$42 \div 15 = 2.8, \text{ and } 100 \times 2.8$$

Answer 280 customers

14

Ali plays a game 40 times. The probability that he wins a game is 0.3. Ben plays a different game 63 times. The probability that he wins a game is $\frac{2}{9}$. Who would you expect to win more games? Show how you know.

Ali 12 wins
Ben 14 wins
Answer Ben

15

At a school fair it costs 50p to play a game. You roll a fair dice once and win £2 if it lands on 6. 120 people play the game. How much money would you expect the game to make for the school?

$$\text{takes } £60, \text{ expect 20 winners, pays out } £40$$

Answer £20

16

Kai is going to roll a fair dice 60 times. He says he will get exactly 10 sixes. Is Kai right? Explain.

$$10 \text{ is how many he would expect, he could get more or fewer}$$

Answer No