

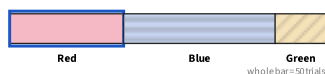
Relative Frequency

1

A spinner is spun 50 times.

Red	Blue	Green	Total
18	24	8	50

- (a) Find the relative frequency of red.
(b) Estimate how many times red would happen in 200 trials.



(a) $\frac{18}{50} = 0.36$

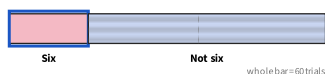
(b) $0.36 \times 200 = 72$

2

A dice is rolled 60 times.

Six	Not six	Total
15	45	60

- (a) Find the relative frequency of six.
(b) Estimate how many times six would happen in 300 trials.



(a) $\frac{15}{60} = 0.25$

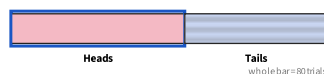
(b) $0.25 \times 300 = 75$

3

A coin is thrown 80 times.

Heads	Tails	Total
44	36	80

- (a) Find the relative frequency of heads.
(b) Estimate how many times heads would happen in 400 trials.



(a) $\frac{44}{80} = 0.55$

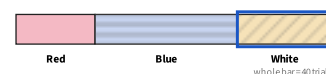
(b) $0.55 \times 400 = 220$

4

A counter is taken from a bag and replaced 40 times.

Red	Blue	White	Total
10	18	12	40

- (a) Find the relative frequency of white.
(b) Estimate how many times white would happen in 150 trials.



(a) $\frac{12}{40} = 0.3$

(b) $0.3 \times 150 = 45$

5

The colours of 120 cars passing a school.

Red	Silver	Black	Total
30	54	36	120

- (a) Find the relative frequency of silver.
(b) Estimate how many times silver would happen in 1000 trials.



(a) $\frac{54}{120} = 0.45$

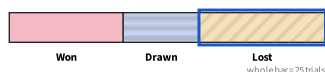
(b) $0.45 \times 1000 = 450$

6

A team's results in 25 games.

Won	Drawn	Lost	Total
9	6	10	25

- (a) Find the relative frequency of lost.
(b) Estimate how many times lost would happen in 60 trials.



(a) $\frac{10}{25} = 0.4$

(b) $0.4 \times 60 = 24$

7

250 bulbs are tested.

Faulty	Working	Total
15	235	250

- (a) Find the relative frequency of faulty.
(b) Estimate how many times faulty would happen in 4000 trials.



(a) $\frac{15}{250} = 0.06$

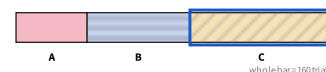
(b) $0.06 \times 4000 = 240$

8

A spinner is spun 160 times.

A	B	C	Total
36	52	72	160

- (a) Find the relative frequency of c.
(b) Estimate how many times c would happen in 900 trials.



(a) $\frac{72}{160} = 0.45$

(b) $0.45 \times 900 = 405$

Relative Frequency *further practice*

9

A café records the drinks it sells.

- (a) Find the relative frequency of coffee.
(b) Estimate how many of the next 500 drinks sold would be coffee.

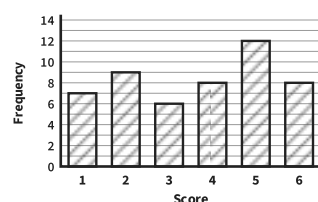
Tea	Coffee	Juice	Total
26	36	18	80

(a) $\frac{36}{80} = 0.45$

(b) $0.45 \times 500 = 225$

10

Lucy rolled a dice 50 times. The bar chart shows her results. (a) Find the relative frequency of a 5. (b) Estimate how many 5s she would get in 300 rolls.



(a) $\frac{12}{50} = 0.24$

(b) $0.24 \times 300 = 72$

11

A survey records the vehicles passing a school gate. Find the relative frequency of a vehicle that is not a car.

Car	Van	Lorry	Total
78	27	15	120

$27 + 15 = 42$, and $\frac{42}{120}$

Answer 0.35

12

Omar flips a bottle 80 times to see if it lands upright. The relative frequency of it landing upright is 0.15. How many times did it land upright?

Upright	Not upright	Total
12	68	80

$0.15 \times 80 = 12$

Answer 12 times

13

Two spinners were tested.

Spinner A landed on red more often. From these results, which spinner seems more likely to land on red? Show how you know.

	Spins	Red	Relative frequency
Spinner A	50	21	0.42
Spinner B	40	18	0.45

0.42 is less than 0.45

Answer Spinner B

14

A bakery sold 250 slices of cake.

(a) Find the relative frequency of chocolate. (b) Estimate how many of the next 600 slices sold would be chocolate.

Lemon	Chocolate	Carrot	Total
64	95	91	250

(a) $\frac{95}{250} = 0.38$

(b) $0.38 \times 600 = 228$

15

45 of a café's last 300 customers ordered soup. The café expects 260 customers tomorrow. One pan of soup serves 15 bowls. How many pans of soup should the café make? Show your working.

$\frac{45}{300} = 0.15$, $0.15 \times 260 = 39 \text{ bowls}$

Answer 3 pans

16

Lena spins a spinner 20 times and it lands on red 8 times. She says the probability that the spinner lands on red is exactly 0.4. Is Lena right? Explain.

0.4 is only an estimate from her 20 spins

Answer No