

Expected Outcomes

ANSWERS

1

$P(\text{red}) = \frac{1}{2}$. How many reds would you expect in 12 spins?

Out of	Expect
2	1
↓ × 6	↓ × 6
12	6

2

$P(\text{blue}) = \frac{1}{4}$. How many blues would you expect in 20 spins?

Out of	Expect
4	1
↓ × 5	↓ × 5
20	5

3

$P(\text{win}) = \frac{1}{10}$. How many wins would you expect in 70 games?

Out of	Expect
10	1
↓ × 7	↓ × 7
70	7

4

$P(\text{green}) = \frac{3}{4}$. How many greens would you expect in 16 spins?

Out of	Expect
4	3
↓ × 4	↓ × 4
16	12

5

$P(\text{yellow}) = \frac{1}{4}$. How many yellows would you expect in 36 spins?

Out of	Expect
4	1
↓ × 9	↓ × 9
36	9

6

$P(\text{win}) = \frac{7}{10}$. How many wins would you expect in 20 games?

Out of	Expect
10	7
↓ × 2	↓ × 2
20	14

7

A coin is flipped 20 times.
 $P(\text{head}) = \frac{1}{2}$. How many heads would you expect?

Out of	Expect
2	1
↓ × 10	↓ × 10
20	10

8

$P(\text{red}) = \frac{1}{10}$. Tom expects 3 reds. How many spins does he do?

Out of	Expect
10	1
↓ × 3	↓ × 3
30	3

Expected Outcomes *further practice*

ANSWERS

9



$P(\text{red}) = \frac{3}{4}$. How many reds would you expect in 20 spins?

Out of	Expect
4	3

↓ × 5 ↓ × 5

20	15
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10



$P(\text{blue}) = \frac{2}{5}$. How many blues would you expect in 25 spins?

Out of	Expect
5	2

↓ × 5 ↓ × 5

25	10
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11



A fair dice is rolled 30 times.
 $P(\text{six}) = \frac{1}{6}$. How many sixes would you expect?

Out of	Expect
6	1

↓ × 5 ↓ × 5

30	5
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12



Amy plants 40 seeds.
 $P(\text{a seed grows}) = \frac{9}{10}$.
How many would you expect to grow?

Out of	Expect
10	9

↓ × 4 ↓ × 4

40	36
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13



$P(\text{win}) = \frac{1}{10}$. How many wins would you expect in 200 games?

Out of	Expect
10	1

↓ ↓

200	20
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$$200 \div 10 = 20, 1 \times 20 = 20$$

Answer 20

14



$P(\text{red}) = \frac{1}{4}$. In 40 spins, how many would you expect not to be red?

Out of	Expect
4	1

↓ ↓

40	10
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$$40 - 10 = 30 \text{ not red}$$

Answer 30

15



$P(\text{red}) = \frac{1}{4}$. Ben expects 6 reds.
How many spins does he do?

Out of	Expect
4	1

↓ ↓

24	6
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$$6 \times 4 = 24$$

Answer 24

16



$P(\text{win}) = \frac{3}{4}$. Sam plays 24 games.
He expects 6 wins. What has he done wrong?

Out of	Expect
4	3

↓ ↓

24	18
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Sam forgot to *multiply by the top*

Right answer $6 \times 3 = 18$