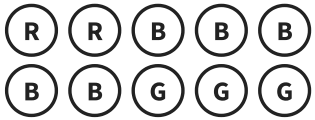
Probability of a single event

ANSWERS

1

A bag holds 2 red, 5 blue and 3 green counters. One counter is taken at random. Find P(blue).

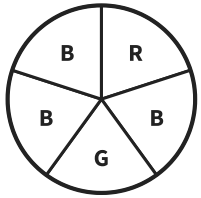


P(blue) = $\frac{5}{10}$ — 5: number of ways it can happen; 10: total number of outcomes

Answer $\frac{5}{10} = \frac{1}{2}$

2

This fair spinner has 5 equal sections. It is spun once. Find P(B).

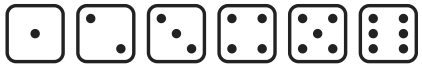


P(B) = $\frac{3}{5}$ — 3: number of ways it can happen; 5: total number of outcomes

Answer $\frac{3}{5}$

3

A fair dice is rolled once. Find P(a number less than 3).



P = $\frac{2}{6}$

Answer $\frac{2}{6} = \frac{1}{3}$

4

These cards are shuffled and one is taken at random. Find P(8).

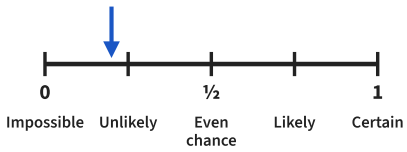


P(8) = $\frac{3}{10}$

Answer $\frac{3}{10}$

5

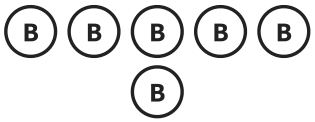
A bag holds 1 red counter and 4 blue counters. One is taken at random.
(a) Find P(red). (b) Mark P(red) on the probability scale with an arrow.



(a) $\frac{1}{5}$

6

A bag holds 6 blue counters and nothing else. One is taken at random.
Find (a) P(blue), (b) P(red). Write a word for each from the probability scale.

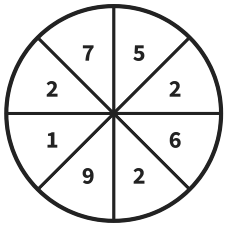


(a) 1, certain

(b) 0, impossible

7

This fair spinner has 8 equal sections.
Find (a) P(2), (b) P(an odd number).

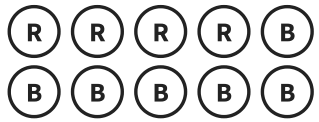


(a) $\frac{3}{8}$

(b) $\frac{4}{8} = \frac{1}{2}$

8

A bag holds 4 red counters and 6 blue counters. Ravi says P(red) = $\frac{4}{6}$.
Explain Ravi's mistake. Then find P(red).



He put red over blue, not over all 10 counters.

P(red) = $\frac{4}{10} = \frac{2}{5}$

Probability of a single event *further practice*

ANSWERS

9

A pot holds 4 black pens, 8 blue pens and 3 red pens. Sam takes a pen at random. Find the probability that it is black.

4 black, out of 15 pens

Answer $\frac{4}{15}$

10

A fair dice has 8 faces, numbered 1 to 8. It is rolled once. Find the probability of a multiple of 3.

1	2	3	4	5	6	7	8

3 and 6: 2 ways out of 8

Answer $\frac{2}{8} = \frac{1}{4}$

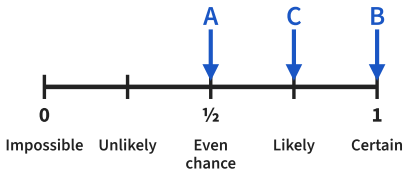
11

Mark each of these on the probability scale with an arrow and its letter.

A: a fair coin lands on tails.

B: a fair dice lands on a number less than 7.

C: a spinner with 4 equal sections, 3 of them red, lands on red.



12

Which is more likely: rolling an even number on a fair dice, or taking a red counter at random from a bag of 3 red and 5 blue counters?
Show how you know.

$\frac{3}{6} = \frac{4}{8}$, more than $\frac{3}{8}$

Answer the even number

13

A school sells 120 raffle tickets.
Amir buys 6 of them. One ticket is picked at random to win the prize.
Find the probability that Amir wins.

6 of the 120 tickets are his

Answer $\frac{6}{120} = \frac{1}{20}$

14

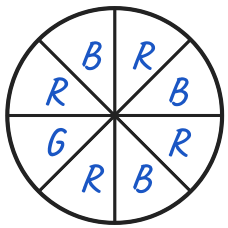
A bag holds 12 counters. Some are red and the rest are blue. One is taken at random. P(red) = $\frac{1}{4}$. How many red counters are in the bag?

$\frac{1}{4} = \frac{3}{12}$

Answer 3 red counters

15

Write R, B or G in each section of this spinner, so that P(R) = $\frac{1}{2}$ and P(B) = $\frac{3}{8}$.
Use G for every other section.



4 R, 3 B and 1 G

16

A bag holds 1 red counter and 9 blue counters. Ella says, "The counter is either red or not red, so P(red) = $\frac{1}{2}$."
Is Ella right? Explain.

the 10 counters are equally likely, and only 1 is red

Answer No, P(red) = $\frac{1}{10}$