

# 1 Probability Problems

1) A number is chosen at random from 1 to 10. Find the probability of selecting number 4 or smaller numbers.

Ans  $\frac{3}{5}$

Including 4 there are 4 numbers that are smaller than 4.

So  $\frac{4}{10}$

$\frac{4}{10} = \frac{2}{5} = 0.4$

2) Bag A contains 9 red marbles and 3 green marbles. Bag B contains 9 black marbles and 6 orange marbles. What is the probability of selecting a green marble at random from bag A? What is the probability of selecting a black marble at random from Bag B?

Ans. bag A contains  $9+3=12$

$\frac{1}{12} = \frac{1}{12} = 0.0833$

Bag B contains  $9+6=15$

$\frac{1}{15} = \frac{1}{15}$

**Commented [1]:** Recheck this answer; should be  $\frac{3}{5}$

3) A number is chosen at random from 1 to 50. What is the probability of selecting multiples of 10. -

Ans. There are 5 multiples of 10 in 50

10, 20, 30, 40, 50

$\frac{5}{50} = \frac{1}{10}$

4) A card is chosen from a well-shuffled deck of 52 cards. What is the probability that the card will be a king OR a queen?

Ans.  $\frac{2}{13}$

$\frac{8}{52}$  divided by 4 =  $\frac{2}{13}$

5) A number is chosen at random from 1 to 10. What is the probability of selecting a multiple of 3.

Ans. Multiples of 3 in 10 are 3, 6, 9

$\frac{3}{10} =$

A spinner, numbered 1-8, is spun once. What is the probability of spinning ...

6) an EVEN number?

Ans. There are 4 even numbers in 1-8 = 2, 4, 6, 8

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

7) a multiple of 3?

Ans. There are 2 multiples of 3 in 1-8 - 3, 6

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

8) a PRIME number?

Ans. There are 4 prime numbers in 1-8, 2, 3, 5, 7

$$4/8 = \frac{1}{4}$$

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9) number 9?

Ans. 0 There is no number 9 in 1-8

**Commented [2]:** Recheck calculations, should be 1/2.

