



#### Probability Ex 13.1 Q14

**Answer :**

GIVEN: A bag contains 6 red, 8 black and 4 white balls and a ball is drawn at random

TO FIND: Probability that the ball drawn is not black

Total number of balls  $6 + 8 + 4 = 18$

Total number of black balls is 8

We know that PROBABILITY =  $\frac{\text{Number of favourable event}}{\text{Total number of event}}$

Probability of getting a black ball  $P(E) = \frac{8}{18} = \frac{4}{9}$  ..... (1)

We know that sum of probability of occurrence of an event and probability of non occurrence of an event is 1.

Hence

$$P(E) + P(\bar{E}) = 1$$

$$\frac{4}{9} + P(\bar{E}) = 1$$

$$P(\bar{E}) = 1 - \frac{4}{9}$$

$$P(\bar{E}) = \boxed{\frac{5}{9}}$$

#### Probability Ex 13.1 Q15

**Answer :**

GIVEN: A bag contains 7 red, and 5 white balls and a ball is drawn at random

TO FIND: Probability that the ball drawn is white

Total number of balls  $7 + 5 = 12$

Total number of white balls is 5

We know that PROBABILITY =  $\frac{\text{Number of favourable event}}{\text{Total number of event}}$

Probability of getting a white ball  $P(E) = \boxed{\frac{5}{12}}$

#### Probability Ex 13.1 Q16

**Answer :**

GIVEN: Tickets are marked from 1 to 20 are mixed up. One ticket is picked at random.

TO FIND: Probability that the ticket bears a multiple of 3 or 7

Total number of cards is 20

Cards marked multiple of 3 or 7 are 3, 6, 7, 9, 12, 14, 15 and 18

Total number of cards marked multiple of 3 or 7 are 8

We know that PROBABILITY =  $\frac{\text{Number of favourable event}}{\text{Total number of event}}$

Hence probability of getting a, multiple of 3 or 7 is  $\frac{8}{20} = \boxed{\frac{2}{5}}$

#### Probability Ex 13.1 Q17

**Answer :**

GIVEN: In a lottery there are 10 prizes and 25 blanks.

TO FIND: Probability of winning a prize

Total number of tickets is  $10 + 25 = 35$

Total number of prize carrying tickets is 10

We know that  $\text{PROBABILITY} = \frac{\text{Number of favourable event}}{\text{Total number of event}}$

Hence probability of winning a prize is  $\frac{10}{35} = \boxed{\frac{2}{7}}$

\*\*\*\*\* END \*\*\*\*\*