



### Probability Ex 13.1 Q18

**Answer :**

Given: Probability of winning a game  $P(E) = 0.3$

TO FIND: Probability of losing the game  $P(\bar{E})$

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

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

$$0.3 + P(\bar{E}) = 1$$

$$P(\bar{E}) = 1 - 0.3$$

$$P(\bar{E}) = 0.7$$

Hence the probability of losing the game is  $P(\bar{E}) = 0.7$

### Probability Ex 13.1 Q19

**Answer :**

GIVEN: A bag contains 7 red, 5 black and 3 white balls and a ball is drawn at random

TO FIND: Probability of getting a

(i) Red ball

(ii) Black or white ball

(iii) Not black ball

Total number of balls  $7 + 5 + 3 = 15$

(i) Total number red balls are 7

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

Hence probability of getting a red ball is equal to =  $\frac{7}{15}$

(ii) Total number of black or white balls is  $5 + 3 = 8$

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

Hence probability of getting white or black ball =  $\frac{8}{15}$

(iii) Total number of black balls is 5

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

Hence probability of getting black ball  $P(E) = \frac{5}{15} = \frac{1}{3}$

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

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

$$\frac{1}{3} + P(\bar{E}) = 1$$

$$P(\bar{E}) = 1 - \frac{1}{3}$$

$$P(\bar{E}) = \frac{2}{3}$$

Hence the probability of getting non black ball  $P(\bar{E}) = \frac{2}{3}$

### Probability Ex 13.1 Q20

**Answer :**

GIVEN: A bag contains 4 red, 5 black and 6 white balls and a ball is drawn at random

TO FIND: Probability of getting a

(i) white ball

(ii) red ball

(iii) not black ball

(iv) red or white

Total number of balls  $4 + 5 + 6 = 15$

(i) Total number white balls are 6

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

Hence probability of getting white a ball is  $\frac{6}{15} = \frac{2}{5}$

(ii) Total number of red are 4

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

Hence probability of getting red a ball is equal to  $= \frac{4}{15}$

(iii) Total number of black balls are 5

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

Hence probability of getting black ball  $P(E) = \frac{5}{15} = \frac{1}{3}$

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

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

$$\frac{1}{3} + P(\bar{E}) = 1$$

$$P(\bar{E}) = 1 - \frac{1}{3}$$

$$P(\bar{E}) = \frac{2}{3}$$

Hence the probability of getting non black ball is  $P(\bar{E}) = \frac{2}{3}$

(iv) Total number of red or white balls is  $4 + 6 = 10$

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

Hence probability of getting white or red ball  $\frac{10}{15} = \frac{2}{3}$

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