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 = $\dfrac{\text{Number of favourable event}}{\text{Total number of event}}$

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

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

Hence

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

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

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

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

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 = $\dfrac{\text{Number of favourable event}}{\text{Total number of event}}$

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

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 and18

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

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

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

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 PROBABILITY = $\dfrac{\text{Number of favourable event}}{\text{Total number of event}}$

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

********** END **********