Probability Ex 13.1 Q23

Answer :

GIVEN: Five cards-ten, jack, queen, king and Ace of diamond are shuffled face downwards

TO FIND: Probability of following

Total number of cards are5

(i) Cards which is a queen

Total number of Cards which are queen is 1

Number of favorable event i.e. Total number of Cards which are queen is 1

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

Hence probability of getting cards which are queen $= \boxed{\frac{1}{5}}$

(ii) If a king is drawn first and put aside then

Total number of cards is 4

Number of favorable event i.e. Total number of ace card is 1

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

Hence probability of getting ace cards $= \boxed{\frac{1}{4}}$

Probability Ex 13.1 Q24

Answer :

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

TO FIND: Probability of getting a

(i) red ball

(ii) white ball

Total number of balls $3+5=8$

(i) Total number red balls are 3

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

Hence probability of getting red ball is equal to $= \boxed{\frac{3}{8}}$

(ii) Total number of black ball are 5

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

Hence probability of getting black ball $= \boxed{\frac{5}{8}}$

Probability Ex 13.1 Q25

Answer :

GIVEN: Cards are marked with one of the numbers 2 to 90 are placed in a bag and mixed thoroughly.
One card is picked at random.
TO FIND: Probability of getting
(i) a two digit number
(ii) a number which is a perfect square
Total number of cards is $90-2+1=89\left(\text{since 2 and 90 both are included}\right)$.
(i) Cards marked two digit starts from 10
Total number of cards marked two digits from 10 to 90 is
$90-10+1=81\left(\text{since 10 and 90 both are included}\right)$
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting a two digit card = $\boxed{\frac{81}{89}}$
(ii) Cards which are perfect square form 2 to 90 are 4,9,16,25,36,49,64,81
Total number of cards marked perfect square from 2 to 90 are 8
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting perfect square card = $\boxed{\frac{8}{89}}$

Probability Ex 13.1 Q26

Answer :

GIVEN: A game of chance consists of spinning an arrow which is equally likely to come to rest pointing number 1,2,3.....12
TO FIND: Probability of following
Total number on the spin is 12
(i) Favorable event i.e. to get 10 is 1
Total number of Favorable event i.e. to get 10 is 1
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting a10 $=\boxed{\frac{1}{12}}$
(ii) Favorable event i.e. to get an odd number are 1,3,5,7,9,11,
Total number of Favorable event i.e. to get a prime number is 6
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting a prime number is $\frac{6}{12}=\boxed{\frac{1}{2}}$
(iii) Favorable event i.e. to get an multiple of 3 are 3,6,9,12
Total number of Favorable event i.e. to get a multiple of 3 is 4
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting multiple of 3 = $\frac{4}{12}=\boxed{\frac{1}{3}}$

(iv) Favorable event i.e. to get an even number are 2,4,6,8,10,12
Total number of Favorable events i.e. to get an even number is 6
We know that PROBABILITY = $\frac{\text{Number of favourable event}}{\text{Total number of event}}$
Hence probability of getting an even number is $\frac{6}{12}=\boxed{\frac{1}{2}}$

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