

Probability Ex 13.1 Q31

Answer:

GIVEN: The face of red cube and a yellow cube are marked 1 to 6

TO FIND: Probability of getting the same number on both the cubes

Let us first write the all possible events that can occur

Hence total number of events is $6^2 = 36$

Favorable events i.e. getting the same number on both the dice are

Hence total number of favorable events i.e. the same number on both the cube is 6

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

Total number of event

Hence probability of getting the same number on both the cube $=\frac{6}{36} = \frac{1}{6}$

Probability Ex 13.1 Q32

Answer:

GIVEN: A bag contains green, white and yellow marbles.

- (i) Probability of selecting green marbles = $\frac{1}{4}$
- (ii) Probability of selecting white marbles = $\frac{1}{3}$
- (iii) The jar contains 10 yellow marbles.

TO FIND: Total number of marbles in the same jar

We know that sum of probabilities of all elementary events is 1. Hence,

P(green marble) + P(white marble) + P(yellow marble) = 1

$$\frac{1}{4} + \frac{1}{3} + P(\text{yellow marble}) = 1$$

$$\frac{3+4}{12}$$
 + P(yellow marble) = 1

$$\frac{7}{12}$$
 + P(yellow marble) = 1

P(yellow marble) =
$$1 - \frac{7}{12}$$

P(yellow marble) =
$$\frac{5}{12}$$

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

Hence

$$\frac{5}{12} = \frac{\text{Number of favourable event ie yellow marble}}{\text{Total number of marble}}$$

$$\frac{5}{12} = \frac{10}{\text{Total number of marbles}}$$

Total number of marbles =
$$\frac{10 \times 12}{5}$$

Total number of marbles = 24

Probability Ex 13.1 Q33

Answer:

GIVEN: Cards are marked with one of the numbers 1 to 30 are placed in a bag and mixed thoroughly. One card is picked at random.

TO FIND: Probability of getting a number not divisible by 3 on the picked card.

Total number of cards is 30

Cards marked number not divisible by 3 is 1,2,4,5,7,8,10,11,13,14,16,17,19,20,22,23,25,26,28,29.

Total number of cards marked numbers not divisible by 3 is 20

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

Hence probability of getting a number divisible by 3 on the card = $\frac{20}{30} = \boxed{\frac{2}{3}}$

