

CHAPTER 15

Probability

Solved Problems:

Example:

Two dice are rolled. Find the probability that the sum of the numbers appears on the upper face of dice is equal to “8”.

Sol.

Let ‘S’ be the sample space ‘S’, when two dice are rolled.

$$S = \left\{ \begin{array}{l} (1,1), (1,2), (1,3), (1,4), (1,5), (1,6) \\ (2,1), (2,2), (2,3), (2,4), (2,5), (2,6) \\ (3,1), (3,2), (3,3), (3,4), (3,5), (3,6) \\ (4,1), (4,2), (4,3), (4,4), (4,5), (4,6) \\ (5,1), (5,2), (5,3), (5,4), (5,5), (5,6) \\ (6,1), (6,2), (6,3), (6,4), (6,5), (6,6) \end{array} \right\}$$

$$\Rightarrow n(S) = 36$$

Let ‘E’ be the event of getting the sum of the numbers appears “8”.

$$E = \{(2, 6), (3, 5), (4, 4), (5, 3), (6, 2)\} \Rightarrow n(E) = 5$$

$$\therefore \boxed{P(E) = \frac{n(E)}{n(S)}}$$

$$\Rightarrow \boxed{P(E) = \frac{5}{36}}$$

