

CHAPTER 15

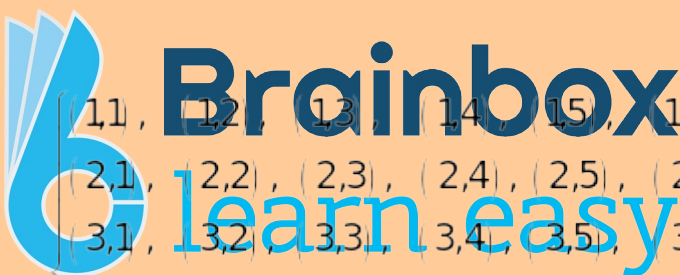
Probability

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”.

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

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

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

