

# NCERT Solutions for Class 12th Maths

## Chapter 13 – Probability

## Exercise 13.1

**Question 1:**

Given that E and F are events such that  $P(E) = 0.6$ ,  $P(F) = 0.3$  and  $P(E \cap F) = 0.2$ , find  $P(E|F)$  and  $P(F|E)$ .

Answer

It is given that  $P(E) = 0.6$ ,  $P(F) = 0.3$ , and  $P(E \cap F) = 0.2$

$$\Rightarrow P(E|F) = \frac{P(E \cap F)}{P(F)} = \frac{0.2}{0.3} = \frac{2}{3}$$

$$\Rightarrow P(F|E) = \frac{P(E \cap F)}{P(E)} = \frac{0.2}{0.6} = \frac{1}{3}$$

**Question 2:**

Compute  $P(A|B)$ , if  $P(B) = 0.5$  and  $P(A \cap B) = 0.32$

Answer

It is given that  $P(B) = 0.5$  and  $P(A \cap B) = 0.32$

$$\Rightarrow P\left(\frac{A}{B}\right) = \frac{P(A \cap B)}{P(B)} = \frac{0.32}{0.5} = \frac{16}{25}$$

**Question 3:**

If  $P(A) = 0.8$ ,  $P(B) = 0.5$  and  $P(B|A) = 0.4$ , find

(i)  $P(A \cap B)$  (ii)  $P(A|B)$  (iii)  $P(A \cup B)$

Answer

It is given that  $P(A) = 0.8$ ,  $P(B) = 0.5$ , and  $P(B|A) = 0.4$

(i)  $P(B|A) = 0.4$