

Assignment 1

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- 1) If $\Pr(A) = \frac{3}{5}$ and $\Pr(B) = \frac{1}{5}$, find $\Pr(A \cap B)$ if A and B are independent events

Solution: Given the probability of occurrence of events A , B as,

$$\Pr(A) = \frac{3}{5} \quad (0.0.1)$$

$$\Pr(B) = \frac{1}{5} \quad (0.0.2)$$

Since the events A , B are independent, we have

$$\Pr(AB) = \Pr(A) \Pr(B) \quad (0.0.3)$$

$$= \frac{3}{5} \times \frac{1}{5} \quad (0.0.4)$$

$$= \frac{3}{25} \quad (0.0.5)$$