

Assignment-1

(12.13.1.2)

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Question 2. Compute $P(A|B)$, if $P(B) = 0.5$ and $P(A \cap B) = 0.32$.

Solution: Given that $P(A \cap B) = 0.32$, $P(B) = 0.5$.
Now we know that,

$$P(A|B) = \frac{P(A \cap B)}{P(B)} \quad (1)$$

So, substituting the values in Equation (1), we get,

$$P(A|B) = \frac{0.32}{0.5}$$

$$\Rightarrow \boxed{P(A|B) = 0.64}$$