If A and B are two events such that $P(B) = \dfrac{3}{5}$, $P(A/B) = \dfrac{1}{2}$ and $P(A \cup B) = \dfrac{4}{5}$, then $P(A)$ equals to

(a) $\dfrac{3}{10}$ 　　　　(b) $\dfrac{1}{5}$ 　　　　(c) $\dfrac{1}{2}$ 　　　　(d) $\dfrac{3}{5}$

Here, $P(B) = \dfrac{3}{5}$, $P(A/B) = \dfrac{1}{2}$ and $P(A \cup B) = \dfrac{4}{5}$

$\because$ 　　　　$P(A/B) = \dfrac{P(A \cap B)}{P(B)}$

$\Rightarrow$ 　　　　$\dfrac{1}{2} = \dfrac{P(A \cap B)}{3/5}$

$\Rightarrow$ 　　　　$P(A \cap B) = \dfrac{3}{5} \times \dfrac{1}{2} = \dfrac{3}{10}$

and 　　　　$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$\Rightarrow$ 　　　　$\dfrac{4}{5} = P(A) + \dfrac{3}{5} - \dfrac{3}{10}$

$\therefore$ 　　　　$P(A) = \dfrac{4}{5} - \dfrac{3}{5} + \dfrac{3}{10} = \dfrac{8 - 6 + 3}{10} = \dfrac{1}{2}$