If A and B are events such that $P(A) = 0.4$, $P(B) = 0.3$ and $P(A \cup B) = 0.5$, then $P(B' \cap A)$ equals to

(a) $\frac{2}{3}$ (b) $\frac{1}{2}$

(c) $\frac{3}{10}$ (d) $\frac{1}{5}$

Here, $P(A) = 0.4$, $P(B) = 0.3$ and $P(A \cup B) = 0.5$

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

$\Rightarrow$ $P(A \cap B) = 0.4 + 0.3 - 0.5 = 0.2$

$\therefore$ $P(B' \cap A) = P(A) - P(A \cap B)$

$= 0.4 - 0.2 = 0.2 = \frac{1}{5}$