

QUESTION

If  $p(A) = 0.3$ ,  $p(B) = 0.8$  and  $p(A \text{ or } B) = 0.9$ , what is  $p(A \text{ and } B)$ ?

ANSWER

$p(A \text{ or } B) = p(A) + p(B) - p(A \text{ and } B)$ ,

therefore  $p(A \text{ and } B) = p(A) + p(B) - p(A \text{ or } B) = 0.3 + 0.8 - 0.9 = 0.2$