

Suppose the probability a coin comes up Heads when flipped is $1/3$. If you flip the coin three times, what is the probability it comes up Heads at least once?

- (a) $19/27$
- (b) $8/27$
- (c) $1/27$
- (d) $26/27$
- (e) $1/9$
- (f) $1/3$
- (g) $2/9$
- (h) $7/8$
- (i) $1/8$
- (j) $3/8$
- (k) $2/3$
- (l) None of these

If A and B are independent events such that $P(AB) = 1/4$ and $P(A - B) = 1/8$, then what is the probability of the event $A^c B^c$?

- (a) $5/24$
- (b) $7/24$
- (c) $1/24$
- (d) $1/8$
- (e) $1/4$
- (f) $1/6$
- (g) $3/8$
- (h) $5/8$
- (i) $1/12$
- (j) $1/3$
- (k) $1/2$
- (l) None of these

Let A, B, C be events such that A and B are independent given C . If $P(A^c B^c C) = P(AB^c C^c) = P(A^c B C^c) = 1/8$, $P(AB^c C) = 1/6$, $P(AB) = 1/4$, and $P(ABC^c) = 0$, then what is $P(A^c BC)$?

- (a) $3/16$
- (b) $3/8$
- (c) $1/16$
- (d) $1/32$
- (e) $3/32$
- (f) $1/8$
- (g) $1/4$
- (h) $5/8$
- (i) $5/32$
- (j) $1/24$
- (k) $5/24$
- (l) None of these