

---

10. Solution: C

Consider the following events about a randomly selected auto insurance customer:

A = customer insures more than one car

B = customer insures a sports car

We want to find the probability of the complement of A intersecting the complement of B (exactly one car, non-sports). But  $P(A^c \cap B^c) = 1 - P(A \cup B)$

And, by the Additive Law,  $P(A \cup B) = P(A) + P(B) - P(A \cap B)$ .

By the Multiplicative Law,  $P(A \cap B) = P(B | A) P(A) = 0.15 * 0.64 = 0.096$

It follows that  $P(A \cup B) = 0.64 + 0.20 - 0.096 = 0.744$  and  $P(A^c \cap B^c) = 1 - 0.744 = 0.256$

---