Conditions

In a certain city, the probability of catching a burglar is 30% with a 60% conviction rate. What's the probability of catching and convicting the burglar.

Solution

This is a question for using a formula of Conditional probability:

$$P(A \cap B) = P(A|B)P(B)$$

A – a burglar will be convicted.

B – a burglar will be caught.

So, the A event could be only if B is already been.

$$P(A \cap B) = 0.3 \cdot 0.6 = 0.18$$

And this is equal to a 18% chance.

Answer: 18%