Probabilidad

Ejercicio 1.

Probabilidades

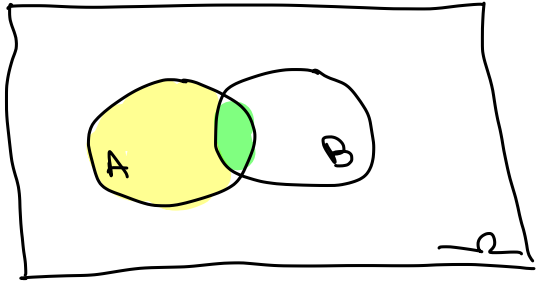
Sabiendo que $P(A \cap B) = 0.6$ y que $P(A \cap B^C) = 0.2$, se pide calcular la probabilidad de A.

Teorema de la Probabilidad Total.

$$P(A) = P(A \cap B) + P(A \cap B^C)$$

↳ complementario.

$$P(A) = 0.6 + 0.2 = 0.8$$



$P(A) = P[(A \cap B) \cup (A \cap B^C)] =$ →

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

$$\rightsquigarrow P(A) = P(A \cap B) + P(A \cap B^c) - \underbrace{P(A \cap B \cap A \cap B^c)}$$

$$P(\emptyset) = 0$$

$$A \cap B \cap A \cap B^c$$

$$=$$

$$A \cap \underbrace{B \cap B^c}$$

$$\emptyset$$

$$\emptyset$$