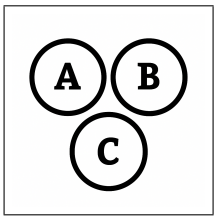
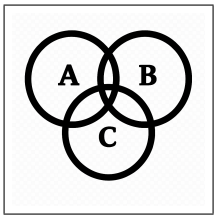
A Independant Events A



$P(A) = 0.40$

$P(B) = 0.70$

$(A, B) =$ 👍



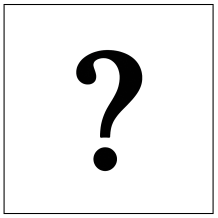
$(A, B) \rightarrow P(A|B) = P(A)$

$(A, B) \rightarrow P(A \cap B) = P(A) \times P(B)$

$(A, B) \rightarrow P(A \cup B) = P(A) + P(B) - P(A) \times P(B)$

$(A, B) \rightarrow P(A \cup B) = 0.40 + 0.70 - 0.40 \times 0.70$

$(A, B) \rightarrow P(A \cup B) = 0.82$

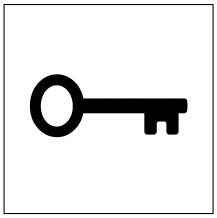


$P(C) = 2 \times P(D)$

$P(C \cap D) = P(C) \times P(D) = 0.15$

$P(C^C \cap D^C) = ?$

A Independant Events A



$P(D) = p$
$P(C) = 2p$

$P(C \cap D) = P(C) \times P(D) = (2p)(p) = 2p^2 = 0.15$
$2p^2 = 0.15 \Rightarrow p^2 = 0.075 \Rightarrow p = \sqrt{0.075} \approx 0.2739$

$P(D) \approx 0.2739$
$P(C) = 2p \approx 0.5478$

$P(C \cup D) = P(C) + P(D) - P(C \cap D)$
$P(C \cup D) \approx 0.5478 + 0.2739 - 0.15 = 0.6717$

$P(C^C \cap D^C) = 1 - 0.6717 \approx 0.33$