

	P(B)	P(B')	
P(A)	0.1	0.25	0.35
P(A')	0.5	0.15	0.65
	0.6	0.4	1

$$P(A) = 0.35, P(B) = 0.6, P(A \text{ and } B) = 0.1$$

$$P(A') = 1 - 0.35 = 0.65; P(B') = 1 - 0.6 = 0.4$$

Are A and B independent? $P(A \text{ and } B) = P(A)P(B) \rightarrow 0.1 = (0.35)(0.6) \rightarrow 0.1 \neq 0.21 \therefore A \text{ and } B$
are NOT independent (they are dependent)

Are A and B mutually exclusive (disjoint)? Since the intersection between A and B exists ($P(A \text{ and } B) = 0.1$ as well as all the other intersections), they cannot be mutually exclusive (disjoint)

$$P(A' \text{ and } B') = 0.15$$

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B) = 0.35 + 0.6 - .01 = 0.85$$

$$P(A' \text{ or } B) = P(A') + P(B) - P(A' \text{ and } B) = 0.65 + 0.6 - 0.5 = 0.75$$