

# Probability Formulas

## **Independent Probability:**

$$P(A \text{ and } B) = P(A) \cdot P(B) \text{ independent}$$

$$P(A) = P(A|B) \text{ or } P(B) = P(B|A)$$

## **Dependent Probability:**

$$P(A \text{ and } B) = P(A) \cdot P(B|A) \text{ dependent}^*$$

$$P(A \text{ and } B) = P(B) \cdot P(A|B) \text{ dependent}^*$$

\*These are both ALWAYS TRUE

$P(B|A)$  means probability of B given A has occurred.