# Conditional probability:

Conditional probability is defined as the likelihood of an event or outcome occurring, based on the occurrence of a previous event or outcome.

p(A|B) is the probability of event A occurring, given that event B occurs.

It is often stated as the probability of B given A and is written as P(B|A), where the probability of B depends on that of A happening.

# Binomial Distribution Formula:

$$P(B|A) = \frac{P(A \text{ and } B)}{P(A)} = \frac{P(A \cap B)}{P(A)}$$

P = Probability

A = Event A

B = Event B

# Summary

Probability looks at the likelihood of one event occurring.

Conditional probability looks at two events occurring in relation to one another. It looks at the probability of a second event occurring based on the probability of the first event occurring.