

Conditional Probability :
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Conditional Probability I

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

*"The probability of **event B** given **event A** equals the probability of **event A and event B** divided by the probability of **event A***



Conditional Probability II

70% of your friends like Chocolate, and 35% like Chocolate AND like Strawberry.

What percent of those who like Chocolate also like Strawberry?





Conditional Probability III

$$P(\text{Strawberry}|\text{Chocolate}) = P(\text{Chocolate and Strawberry}) / P(\text{Chocolate})$$

$$0.35 / 0.7 = 50\%$$

50% of your friends who like Chocolate also like Strawberry