

PROBABILITY

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

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

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$P(A \cap B) = P(A)P(B)$ if A and B are independent

$P(A \cap B) = P(A)P(B|A)$

$P(A \cap B) = P(B)P(A|B)$

$P(A|B) = P(A)$ if A and B are independent

$P(B|A) = P(B)$ if A and B are independent

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