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

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

$$P(A' \cup B') = P((A \cap B)')$$

$$P(A' \cap B') = P((A \cup B)')$$

$$\bar{V}_n^k = n^k$$

$$V_n^k = n(n-1)(n-2)...(n-k+1)$$

$$\bar{C}_n^k = \binom{k+n-1}{k}$$

$$C_n^k = \binom{n}{k}$$

$$P_n = n!$$

Zdarzenia niezależne;

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

$$P(\bigcup_{i=1}^{n} A_i) = 1 - \prod_{i=1}^{n}(1 - P(A_i))$$

Prawdopodobieństwo warunkowe:

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

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

Dystrybuanta:

$$F_X(x) = P(X < x)$$

$$P(X < b) = F(b)$$

$$P(X \leq b) = \lim_{x \to b^+} F(x)$$

$$P(X \geq b) = 1 - F(b)$$

$$P(X > b) = 1 - \lim_{x \to b^+} F(b)$$

$$F(a \leq X < b) = F(b) - F(a)$$

$$F(a < X < b) = F(b) - \lim_{x \to a^+} F(a)$$

$$F(a \leq X \leq b) = \lim_{x \to b^+} F(b) - F(a)$$

$$F(a < X \leq b) = \lim_{x \to b^+} F(b) - \lim_{x \to a^+} F(a)$$