

	zmienna losowa dyskretna	zmienna losowa ciągła
dystribuanta	$F(x, y) = P(X \leq x, Y \leq y) = \sum_{x_i \leq x} \sum_{y_j \leq y} P(x_i, y_j)$	$F(x, y) = P(X \leq x, Y \leq y) = \int_{-\infty}^x \int_{-\infty}^y f(u, v) dv du$
dystribuanta brzegowa	$F_X(x) = P(X \leq x) = \sum_{x_i \leq x} \sum_{y_j} P(x_i, y_j)$ $F_Y(y) = P(Y \leq y) = \sum_{y_j \leq y} \sum_{x_i} P(x_i, y_j)$	$F_X(x) = \int_{-\infty}^x f_X(u) du$ $F_Y(y) = \int_{-\infty}^y f_Y(v) dv$
gęstość brzegowa		$f_X(x) = \int_{-\infty}^{\infty} f(x, y) dy$ $f_Y(y) = \int_{-\infty}^{\infty} f(x, y) dx$
rozkład warunkowy	$P(X = x_i   Y = y_j) = \frac{P(X=x_i, Y=y_j)}{P(Y=y_j)}$ $P(Y = y_j   X = x_i) = \frac{P(Y=y_j, X=x_i)}{P(X=x_i)}$	
gęstość warunkowa		$f(x y) = \frac{f(x,y)}{f_Y(y)}$ $f(y x) = \frac{f(x,y)}{f_X(x)}$
dystribuanta warunkowa	$F(x y_j) = P(X \leq x   Y = y_j) = \sum_{x_i \leq x} P(X = x_i   Y = y_j)$ $F(y x_i) = P(Y \leq y   X = x_i) = \sum_{y_j \leq y} P(Y = y_j   X = x_i)$	$F(x y) = \int_{-\infty}^x f(u y) du = \frac{1}{f_Y(y)} \int_{-\infty}^x f(u, y) du$ $F(y x) = \int_{-\infty}^y f(x v) dv = \frac{1}{f_X(x)} \int_{-\infty}^y f(x, v) dv$
warunkowa wartość oczekiwana	$E(X Y = y) = \sum_{x_i} x_i P(X = x_i   Y = y)$ $E(Y X = x) = \sum_{y_j} y_j P(Y = y_j   X = x)$	$E(X Y = y) = \int_{-\infty}^{\infty} x f(x y) dx$ $E(Y X = x) = \int_{-\infty}^{\infty} y f(y x) dy$
wartość oczekiwana (brzegowa)	$EX = \sum_{x_i} x_i P_X(X = x_i)$ $EY = \sum_{y_j} y_j P_Y(Y = y_j)$	$EX = \int_{-\infty}^{\infty} x f_X(x) dx$ $EY = \int_{-\infty}^{\infty} y f_Y(y) dy$