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## 1. Varianz

Ereignis	X	$P(X = g)$	$P(X = g) * g$	$P(X = g) * g^2$

## 2. Linear Regression

i	$x_i$	$y_i$	$x_i^2$	$y_i^2$	$x_i y_i$
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
	$E(X)$	$E(Y)$	$E(X^2)$	$E(Y^2)$	$E(XY)$

- $\text{var}(X) = E(X^2) - E(X)^2 =$
- $\text{var}(Y) = E(Y^2) - E(Y)^2 =$
- $\text{cov}(X, Y) = E(XY) - E(X)E(Y) =$
- $a = \text{cov}(X, Y) / \text{var}(X) =$
- $b = E(Y) - aE(X) =$
- $r = \text{cov}(X, Y) / \sqrt{\text{var}(X)\text{var}(Y)} =$

### 3. $\chi^2$ -Test

i	$p_i$	$n_i$	$np_i$	$n_i - np_i$	$(n_i - np_i)^2 / np_i$
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		$n = \sum(n_i)$			$D = \sum(n_i - np_i)^2 / np_i$

## 4. Kolmogorov-Smirnov