Sample variance

$$S_X^2 = \frac{1}{n-1}\sum_1^n (X_i - \bar{X})^2 \tag{1}$$

Sample correlation coefficient

$$r_{X,Y} = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{(n-1)\sqrt{(S_X^2 S_Y^2)}} \tag{2}$$

QQ-plot for cumulative distribution function F is the set of points $\left(q_F\left(\frac{i}{n+1}\right), x_{(i)}\right)$, where $q_F(\cdot)$ is the quantile function for the distribution.

Estimators

Mean Squared Error (MSE)

$$MSE(\theta; T(X), g(\theta)) = \mathbf{E}_\theta \left(T(X) - g(\theta)\right)^2 \tag{3}$$

$MSE(\theta; T(X)) = \mathrm{var}_\theta T + \left(\mathbf{E}_\theta T(X) - g(\theta)\right)^2$