

# តារាង សង្ខេបរូបមន្ត

	Population	Sample	Probability
Mean	$\mu = \frac{1}{N} \sum_{i=1}^N X_i ; X_i \in \mathbb{R}$	$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i ; X_i \in \mathbb{R}$	$E(X) = \mu = \sum_{x=1}^n xP(X = x)$
Variance	$\sigma^2 = \frac{1}{N} \sum_{i=1}^N (X_i - \mu)^2$	$S^2 = \frac{1}{n-1} \sum_{i=1}^n (X_i - \bar{X})^2$	$V(X) = \sigma^2 = E[(X - E(X))^2] = E(X^2) - [E(X)]^2$
Covariance	$\sigma_{X,Y}^2 = \frac{1}{N} \sum_{i=1}^N (X_i - \mu_X)(Y_i - \mu_Y)$	$S_{X,Y}^2 = \frac{1}{n-1} \sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})$	$Cov(X, Y) = \sigma_{X,Y}^2 = E[(X - E(X))(Y - E(Y))] = E(XY) - E(X)E(Y)$
Correlation	$\rho = \frac{\sigma_{X,Y}^2}{\sqrt{\sigma_X^2 \sigma_Y^2}}$	$r = \frac{S_{X,Y}^2}{\sqrt{S_X^2 S_Y^2}}$	$\rho = \frac{\sigma_{X,Y}^2}{\sqrt{\sigma_X^2 \sigma_Y^2}}$
Proportion	$\pi = \frac{1}{N} \sum_{i=1}^N X_i ; x \in \{0, 1\}$	$p = \frac{1}{n} \sum_{i=1}^n X_i ; x \in \{0, 1\}$	