

# Statistics Symbols

Population Parameters	Sample Statistics (point estimates)
Population Mean (mu): $\mu$	Sample Mean (x bar): $\bar{x}$
Population Standard Deviation (sigma): $\sigma$	Sample Standard Deviation: $s$
Population Variance (sigma squared): $\sigma^2$	Sample Variance: $s^2$
Population Proportion: $p$ or $\pi$	Sample Proportion (p-hat) or (p-prime): $\hat{p}$ or $p'$

Other symbols			
Sum: $\Sigma$		Sample Size: $n$	
Z-score (standardized value) or (z-test statistic): $z$		T-score (t-test statistic): $t$	
Z-critical value: $z_\alpha$	2-tail Z-critical value: $z_{\alpha/2}$ or $z^*$	T-critical value: $t_\alpha$	2-tail T-critical value $t_{\alpha/2}$ or $t^*$
Mean of the sample means: $\mu_{\bar{x}}$		Standard deviation of the sample means: $\sigma_{\bar{x}}$	
Null hypothesis: $H_0$		Alternative hypothesis: $H_a$ or $H_1$	
Significance level (alpha): $\alpha$		Chi-square test statistic: $\chi^2$	
Correlation coefficient: $r$		Coefficient of determination: $r^2$	