

List of formulas		
$v(\bar{x}) = \frac{N-n}{Nn} s^2$	$v(p) = \frac{N-n}{N(n-1)} pq$	$s^2 = \frac{1}{n-1} \left[\sum x^2 - \frac{(\sum x)^2}{n} \right]$
$v(\hat{X}) = N^2 v(\bar{x})$	$s.e.(p) = \sqrt{v(p)}$	$\bar{x} \pm t_{n-1} * s.e.(\bar{x})$
$s.e.(\bar{x}) = \sqrt{v(\bar{x})}$	$\hat{X} = N\bar{x}$	$\hat{X} \pm t_{n-1} * s.e.(\hat{X})$
$n = \frac{z^2 v(X)}{d^2}$	$n = \frac{z^2 pq}{d^2}$	$s.e.(\hat{X}) = \sqrt{v(\hat{X})}$
$P(X > x) = e^{-\frac{x}{\lambda}}$	$P(X < x) = 1 - e^{-\frac{x}{\lambda}}$	$P(x_1 < X < x_2) = e^{-\frac{x_1}{\lambda}} - e^{-\frac{x_2}{\lambda}}$
$P(T > t) = e^{-\lambda t}$	$P(T < t) = 1 - e^{-\lambda t}$	$P(t_1 < T < t_2) = e^{-\lambda t_1} - e^{-\lambda t_2}$
$P(X > x) = e^{-\frac{x^2}{2\sigma^2}}$	$P(X < x) = 1 - e^{-\frac{x^2}{2\sigma^2}}$	$P(x_1 < X < x_2) = e^{-\frac{x_1^2}{2\sigma^2}} - e^{-\frac{x_2^2}{2\sigma^2}}$
$z = \frac{\bar{x} - \mu_0}{\sqrt{\frac{s^2}{n}}}$	$t = \frac{\bar{x} - \mu_0}{\sqrt{\frac{s^2}{n}}} \sim t_{n-1}$	$\chi^2 = \sum \frac{o_{ij}^2}{E_{ij}} - n \sim \chi_{(r-1)(c-1)}^2$
$z = \frac{p_1 - p_2}{\sqrt{PQ \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$	$z = \frac{p - p_0}{\sqrt{\frac{p_0 Q_0}{n}}}$	$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \sim t_{(n_1-1)+(n_2-1)}$
$P = \frac{a_1 + a_2}{n_1 + n_2}$	$r = \frac{SP(xy)}{\sqrt{SS(x) SS(y)}}$	$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{(n_1 - 1) + (n_2 - 1)}$
$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} \sim t_{n-2}$	$SS(y) = \sum y^2 - \frac{(\sum y)^2}{n}$	$\chi^2 = \sum \frac{o_i^2}{E_i} - n \sim \chi_{(k-1)}^2, E_i = \frac{n}{k}$
$SS(x) = \sum x^2 - \frac{(\sum x)^2}{n}$	$SP(xy) = \sum xy - \frac{\sum x \sum y}{n}$	$\chi^2 = \frac{n(ad - bc)^2}{(a+b)(a+c)(b+d)(c+d)} \sim \chi_1^2$
$\hat{y} = a + bx$	$TSS = \sum \sum y_{ij}^2 - CT$	$SS(\text{Error}) = TSS - SS(\text{Factor})$
$z = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\left(\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2} \right)}}$	$t = \frac{b}{\sqrt{\frac{s^2}{SS(x)}}}$	$SS(\text{Factor}) = \sum \frac{y_i^2}{n_i} - CT$
$b = \frac{SP(xy)}{SS(x)}$	$MS = \frac{SS}{df}, CT = \frac{G^2}{n}$	$s^2 = \frac{ss(y) - b sp(xy)}{n - 2}$

Random number		t Table				χ^2 Table		Normal Table	
		df	value	df	value	df	value	z	P(z)
12212	01885								
12294	10179	1	12.706	11	2.201	1	3.841	0.14	0.5557
11584	17594	2	4.303	12	2.179	2	5.991	0.71	0.7611
16986	15206	3	3.182	13	2.160	3	7.815	0.99	0.8389
16141	09232	4	2.776	14	2.145	4	9.488	-0.42	0.3372
09294	41214	5	2.571	15	2.131	5	11.071	0.17	0.5675
12584	54259	6	2.447	16	2.120			-0.83	0.8033
16986	20888	7	2.365	17	2.110	F Table		0.42	0.6628
19278	16278	8	2.306	18	2.101	$F_{4,20}$	2.87	-0.33	0.3707
10553	01177	9	2.262	19	2.093	$F_{3,16}$	3.24	-0.25	0.4013
09876	16141	10	2.228	20	2.086	z_{0.05} = 1.96			