

Math 1310 Tables, Rules and Formulas

p	~p
T	F
F	T

p	q	p ∧ q
T	T	T
T	F	F
F	T	F
F	F	F

p	q	p ∨ q
T	T	T
T	F	T
F	T	T
F	F	F

p	q	p → q
T	T	T
T	F	F
F	T	T
F	F	T

p	q	p ↔ q
T	T	T
T	F	F
F	T	F
F	F	T

$$I = Prt$$

$$A = P(1 + rt)$$

$$A = P\left(1 + \frac{r}{n}\right)^{nt} \text{ or } P = \frac{A}{\left(1 + \frac{r}{n}\right)^{nt}}$$

$$A = Pe^r$$

$$Y = \left(1 + \frac{r}{n}\right)^n - 1 = -1 + \left(1 + \frac{r}{n}\right)^n$$

$$A = \frac{P[(1+r)^t - 1]}{r}$$

$$A = \frac{P\left[\left(1 + \frac{r}{n}\right)^{nt} - 1\right]}{\left(\frac{r}{n}\right)} \text{ or } P = \frac{A\left(\frac{r}{n}\right)}{\left[\left(1 + \frac{r}{n}\right)^{nt} - 1\right]}$$

$$PMT = \frac{P\left(\frac{r}{n}\right)}{\left[1 - \left(1 + \frac{r}{n}\right)^{-nt}\right]}$$

$${}_n P_r = \frac{n!}{(n-r)!}$$

$${}_n C_r = \frac{n!}{(n-r)!r!}$$

$$P(E) = \frac{n(E)}{n(S)}$$

$$0 \leq P(E) \leq 1$$

$$P(E) + P(E') = 1$$

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$\text{Odds in favor of } E = \frac{P(E)}{P(E')}$$

$$\text{Odds against } E = \frac{P(E')}{P(E)}$$

$$P(E) = \frac{a}{a+b}, \text{ odds in favor are } a \text{ to } b$$

$$\bar{x} = \frac{\sum xf}{n}$$

median is the value in the $\frac{n+1}{2}$ position

$$s = \sqrt{\frac{\sum(x - \bar{x})^2}{n-1}}$$