**Math I Formulas**

$$y=mx+b$$

$$m= \frac{y\_{2}-y\_{1}}{x\_{2}-x\_{1}}$$

$$parallel lines have the same slope$$

$$perpendicular lines have slopes that are negative reciprocals \left(change the sign and flip it\right)$$

$$y=ax^{2}+bx+c$$

$$x= \frac{-b}{2a}$$

$$y=a(b)^{x}$$

$$y=a(1+r)^{x}$$

$$a\_{n}=a\_{1}+d(n-1)$$

$$a\_{n}=a\_{o}(r)^{n-1}$$

$$a\_{n}=a\_{1}(r)^{n}$$

$$d= \sqrt{(x\_{2}-x\_{1})^{2}+(y\_{2}-y\_{1})^{2}}$$

$M\_{x}=\frac{x\_{1}+x\_{2}}{2}$ $M\_{x}=\frac{y\_{1}+y\_{2}}{2}$

$$a^{2}+b^{2}=c^{2}$$