

## Functions #4

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### Math Library

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compint - compound interest.

P = principle (amt investing)

r = percentage on return each year 3% (.03)

In 1 year =  $P(1.03)$

In 2 years =  $P(1.03)(1.03)$

In n years =  $P(1 + r/100)^n$

// Returns base raised to the power exp.

math.pow(base,exp)

Compounded interest is that instead of calculating your interest once a year, we calculate it 12 times a year, so our effective rate is  $r/12$ , but then we do this for 12 time periods a year, so a total of  $12n$  time periods  $n$  years, compounded monthly =  $P(1 + r/1200)^{12n}$

$$ax^2 + bx + c = 0$$

$$x = (-b \pm \sqrt{b^2 - 4ac})/2a$$

$$\text{Combination } C(n, k) = n!/k!(n-k)!$$