COMPOUND INTEREST

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

A: amount
P: y-int. initial $ principal
r: rate (annual) → decimal
n: # of times compounded
t: time

$y = a(b)^t$

Ex: You deposit $4000 in an account that pays 2.92% annual interest. Find the balance if the interest if compounded: after 1 year

$2.92 \rightarrow \frac{2.92}{100}$

a) quarterly

$n = 4$ $P = 4000$ $r = 0.0292$ $t = 1$

$A = 4000\left(1 + \frac{0.0292}{4}\right)^{4(1)}$

$\$4118.09$

b) daily

$n = 365$

$A = 400\left(1 + \frac{0.0292}{365}\right)^{365}$

$= \$4118.52$

c) annually

$n = 1$