

## Exponential Growth

$$y = a(1+r)^t$$

y – final amount

a – initial amount

r – rate (always in decimal form)

t – time

## Exponential Decay

$$y = a(1-r)^t$$

y – final amount

a – initial amount

r – rate (always in decimal form)

t – time

## Compound Interest

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

A – current amount

P – initial amount

r – annual interest rate

n – number of times interest is compounded

t – time in years