

Warm-Up

12/15/2017

Write a recursive formula for each.

1) $u_0 = 16$

50% growth

$$u_0 = 16$$

$$u_n = u_{n-1} \cdot 1.5$$

2) $u_0 = 100$

12.5% decay

$$u_0 = 100$$

$$u_n = u_{n-1} \cdot .875$$

Exponential Equations

$$y = a \cdot b^x$$

↑
start
value

↑
constant
multiplier

Examples

$$y = 16(1.5)^x$$

A \$16 sports card gains 50% value each year.

y = total value
 x = # of years

$$y = 100(.875)^x$$

A hot tub w/ 100 gallons of water evaporates 12.5% each week.

y = total gallons
 x = # of weeks