(Optional) 3.2 Warm-Up

Friday, November 6, 2015 1:48 PM

$y = a \cdot b^x$

$y = \frac{c}{1 + a \cdot b^x}$

Precalculus
Exponential and Logistic Growth Opener

Name:
Period:

Find the logistic growth function that models the data below:

1. Initial Height = 6, Limit to Growth = 20, passing through (3, 15)

(0, 6)

$y = \frac{20}{1 + a \cdot b^x}$

$y = \frac{20}{1 + 7/3 \cdot .52^x}$

2. Initial Value = 12, Limit to Growth = 30, passing through (2, 20)

$y = \frac{30}{1 + 1.5 \cdot .68^x}$

Find an exponential function that models the data below:

$y = a \cdot b^x$

3. Initial population = 67,000, increasing at a rate of 1.67% per day

$y = I(1 \pm r)^t$

$y = 67{,}000(1.0167)^t$

4. Initial height = 18cm, doubling every 3 weeks

$y = 18 \cdot (2)^{t/3}$

$43 = 18 \cdot 2^{t/3}$

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