Bellwork Friday, March 14, 2014

1. Write each as a logarithm.

a) $x^4 = 50$ $\log_x 50 = 4$

b) $5^6 = x$ $\log_5 x = 6$

c) $9^x = 40$ $\log_9 40 = x$

2. Write each as an exponential.

a) $\log X = 100$ $10^{100} = X$

b) $\log_x 90 = 3$ $x^3 = 90$

c) $\log_2 7 = x$ $2^x = 7$

3. The amount of a certain substance decays 7% each year. There was 400 kg of this substance in 2008.

a) Find the amount of this substance in 2000 to the nearest tenth.

$X = -8$ 714.8 kg $y = 400(.93)^x$

b) Find the amount of this substance in 2020 to the nearest tenth.

$X = 12$ 167.4 kg

c) In how many years after 2008 will there be 50 kg remaining? Round to the nearest tenth.

$50 = 400(.93)^x$

$X = 28.7$ yrs