Alg 2B Hwk #14 Sec 8-1 Fall 2017 Name:

1. Use each percent change to find the base of an exponential equation.

a) 46% Increase b = b) 18.03% decrease b =

2. For each exponential equation find the percent change and state if it is an increase or a decrease.

a) $y = 4500(0.306)^x$ b) $y = 1.025(1.219)^x$

% change = % change =

3. Tell if each exponential equation represents Growth or Decay.

a) $y = 920(0.99985)^x$ b) $y = 57\left(\frac{156}{150}\right)^x$ c) $y = 2.1(1.34)^{-x}$

4. The number of foreclosures has been decreasing 1.3% each year since 2010 when there was 1,300,000.

a) Find the number of foreclosures in 2016

b) Find the number of foreclosures in 2005.

5. The value of a painting has been increasing 4.9% each year. The painting was valued at $35,000 in 1999.

a) Find the value in 2010

b) Find the value in 1990.

6. The number of cells of a certain virus doubles every 15 minutes. At 8:00 am there were 20 bacteria.

a) Find the number of cells at noon the same day.

b) Find the number cells at 2:30pm that same day.

7. The certain medicine has a half-life of 20 mintues. At 6:00pm you took a 420mg dose.

a) Find the amount of medicine remaining at 10:50 pm the same day.

b) Find the amount of medicine remaining at 5:00 am the next morning.