Algebra 2   Hwk #2   Logarithms   Spring 2019   Name:

1. Rewrite each into exponential form.

a) $\log_3 x = 7$

b) $\log 8 = x$

c) $\log_x 5 = 100$

2. Rewrite each into logarithmic form.

a) $12^x = 70$

b) $x^9 = 200$

c) $10^3 = x$

3. Solve each. Round to the nearest hundredth.

a) $8^x = 500$

b) $10^x = 225$

4. The number of cells in a culture is doubling every hour. There are 500 cells at 10:00am. In how many hours will there be 1,000,000 cells? Round to the nearest hundredth.

5. The number of people in a city is decreasing 3.5% each year. The population in 2015 was 400,000. In how many years will the population reach 300,000? Round to the nearest tenth.

6. The value of an investment is increasing 6.5% each year. If the investment was worth $20,000 find the number of years it will take for the investment to reach $500,000. Round to the nearest hundredth.