Algebra 2 Hwk #1 Exponential Growth and Decay Spring 2019 Name:

1. State the percent change each exponential equation represents.

a) $y = 815(1.103)^x$ b) $y = 9000(0.8016)^x$

For 2 to 5, show the equation that you used to get your answers.

2. The number of cells of a certain bacteria is doubling every $1\frac{1}{2}$ hours. At 1:00pm there are 800 cells. Find the number of cells at each time, the same day, to the nearest whole number.

a) 4:45 pm b) 10:30 am

3. When your first child is born you put $10,000 into an account that promises to pay 6.5% interest each year. If you leave that money in the account until your child is 18 years old find the amount of money in the account at that time.

4. Every 5 years the population of a city has been decreasing by 3.4%. The population in 2005 was 432,000. Find the population of the city in the following years to the nearest whole number.

a) 2018 b) 1999

4. The half-life of a medication is 1hour and 10 minutes. There are 250mg of this medication in a patients system at 9:00am. Find the amount of material in the patients system at 1:30pm the same day.