Final Review #3: Exponential Equations

Percent Increase or Decrease

Percent Increase:	Percent Decrease:

Linear vs. Exponential

Linear:	Exponential:

Examples

1. At 2 pm, the population in the sample is 700. It increases by 200 bacteria every hour. How many bacteria will be in the sample at 11 pm?	2. At 2 pm, the population in the sample is 1000. It triples every hour. How many bacteria will be in the sample at 5 pm?
3. At 2 pm, the population of the sample was 300. The population decreases by 31% each hour. How many bacteria will be in the sample at midnight?	4. At 2 pm, the population of the sample was 900. The population increases by 7.2% each hour. How many bacteria will be in the sample at 8 pm?

Solve by Creating Common Bases

$2^x \cdot 2^{x-5} = 8^{2x+1}$	$\left(\dfrac{1}{3}\right)^x = 3^{x+1} \cdot 9^x$