Algebra II

Just Checking #2… Week of 1-11-16 Name _____

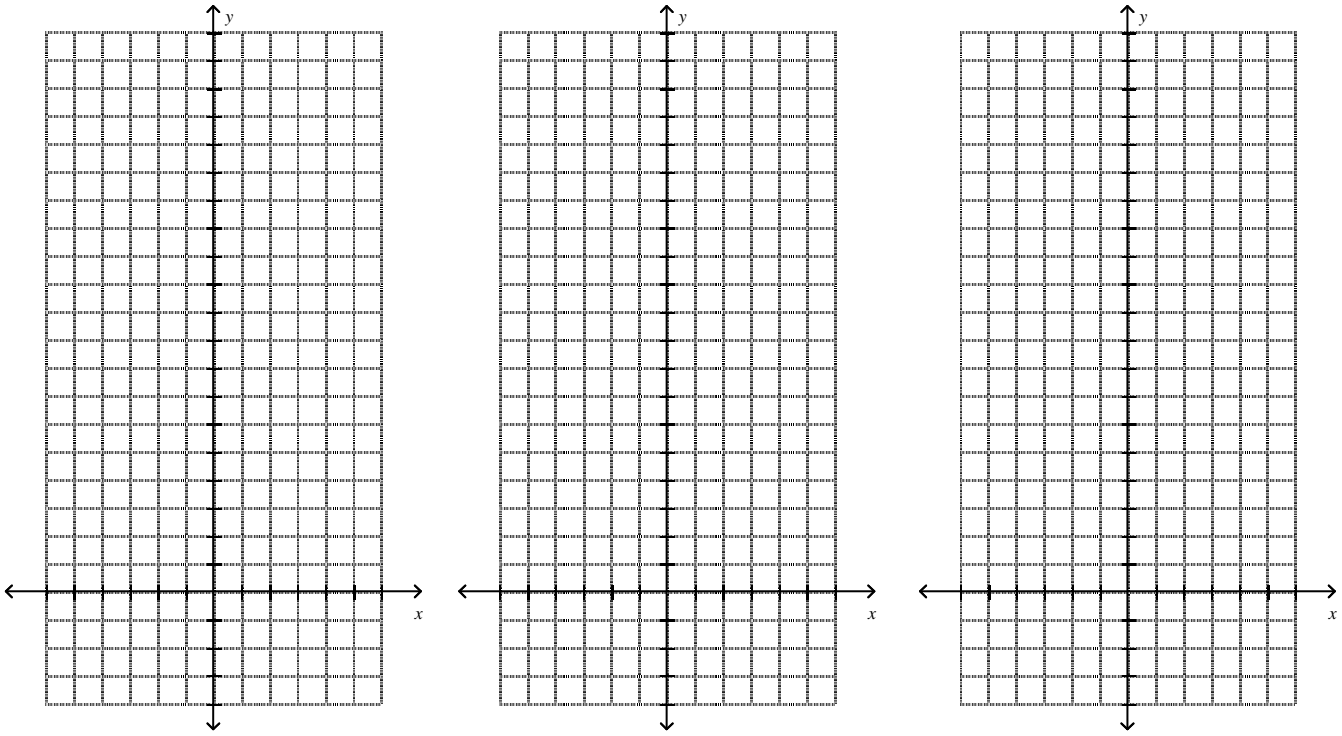
Practice

Graph the following exponential functions.

1. $y = 3\ (2)^x$

2. $y = 8\left(\frac{1}{2}\right)^x$

3. $y = 2\ (3)^x - 1$



4. An initial population of 729 quail increases at an annual rate of 24%.
   a. Write an exponential function to model the quail population.

   b. What will the approximate population be after 5 years? Round the answer to the nearest whole number.

5. An initial population of 1211 humpback whales decreases at an annual rate of 9%.
   a. Write an exponential function to model the humpback whale population.

   b. What will the approximate population be after 5 years? Round the answer to the nearest whole number.

Solve by finding a common base.

6. $8^{x} = 512$

7. $5^{-x} = 625$

8. $64^{3x} = 32$

9. $81^{2x-7} = 27$

10. $\left(\frac{1}{7}\right)^{x} = \frac{1}{2401}$