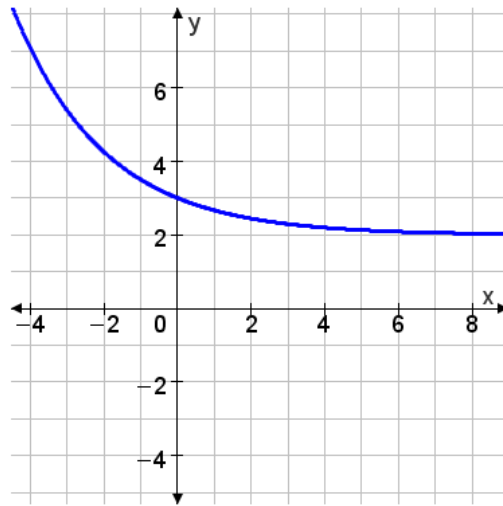


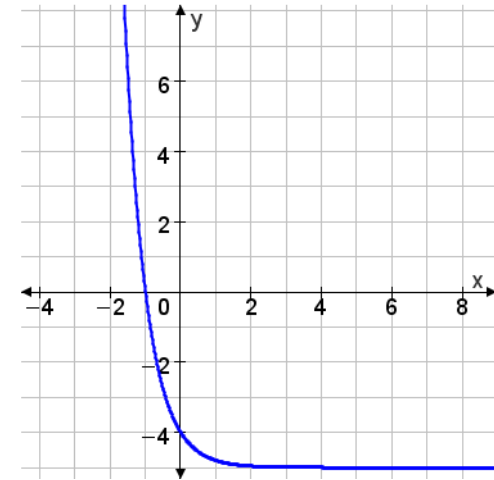
Name: _____ Date: _____

Exponential graphing!

- 1) Domain: _____
 Range: _____
 X-intercept: _____
 Y-intercept: _____
 Increasing or Decreasing
 Growth or Decay
 Asymptote: _____
 End Behavior
 As $x \rightarrow -\infty$, $y \rightarrow$ _____
 As $x \rightarrow \infty$, $y \rightarrow$ _____



- 2) Domain: _____
 Range: _____
 Zero: _____
 y-intercept: _____
 Increasing or Decreasing?
 Growth or Decay
 Asymptote: _____
 End Behavior
 As $x \rightarrow -\infty$, $y \rightarrow$ _____
 As $x \rightarrow \infty$, $y \rightarrow$ _____



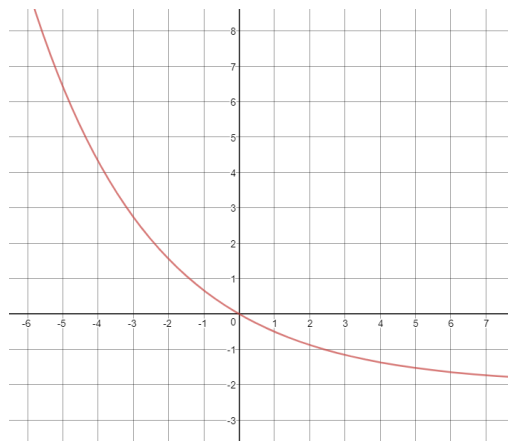
3) $y = \frac{1}{4}(6)^{x-1} - 3$
 Stretch or Shrink? _____
 By how much? _____
 Growth or Decay? _____
 Reflection or no Reflection? _____
 Horizontal Shift? _____
 Vertical Shift? _____
 Asymptote? _____
 y-intercept? _____

4) $y = -4\left(\frac{2}{3}\right)^x + 5$
 Stretch or Shrink? _____
 By how much? _____
 Growth or Decay? _____
 Reflection or no Reflection? _____
 Horizontal Shift? _____
 Vertical Shift? _____
 Asymptote? _____

5) $y = \frac{1}{2}\left(\frac{3}{4}\right)^{x-7}$
 Stretch or Shrink? _____
 By how much? _____
 Growth or Decay? _____
 Reflection or no Reflection? _____
 Horizontal Shift? _____
 Vertical Shift? _____
 Asymptote? _____
 Y-intercept? _____

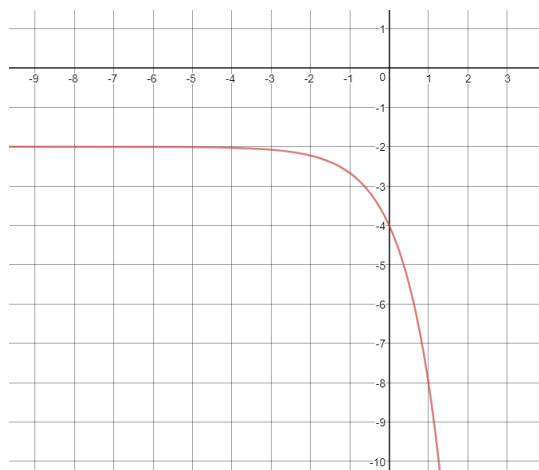
6) What is the equation of the graph?

- A. $y = 2\left(\frac{3}{4}\right)^x - 2$
- B. $y = 2\left(\frac{3}{4}\right)^x + 2$
- C. $y = -2\left(\frac{3}{4}\right)^x - 2$
- D. $y = 2\left(\frac{4}{3}\right)^x - 2$



7) What is the equation of the graph?

- A. $y = 2\left(\frac{1}{3}\right)^x - 2$
- B. $y = -2\left(\frac{1}{3}\right)^x - 2$
- C. $y = 2(3)^x - 2$
- D. $y = -2(3)^x - 2$



8) Describe the transformations of how $f(x) = 5^x$ would change into $f(x) = 5^x + 1$

9) How is the graph $f(x) = \frac{1}{2}$ would change into $f(x) = \frac{1}{2}^{x-5}$

10) What is the y-intercept of $y = \frac{1}{2}(2)^x - 6$?

11) Write the equation of a function that is a decay with a base of $\frac{2}{3}$ a asymptote of 4 and a right shift of 3.

12) What would be the equation of an exponential function that is a reflected growth function by a base of 3 that is shifted up 5 and right 2?