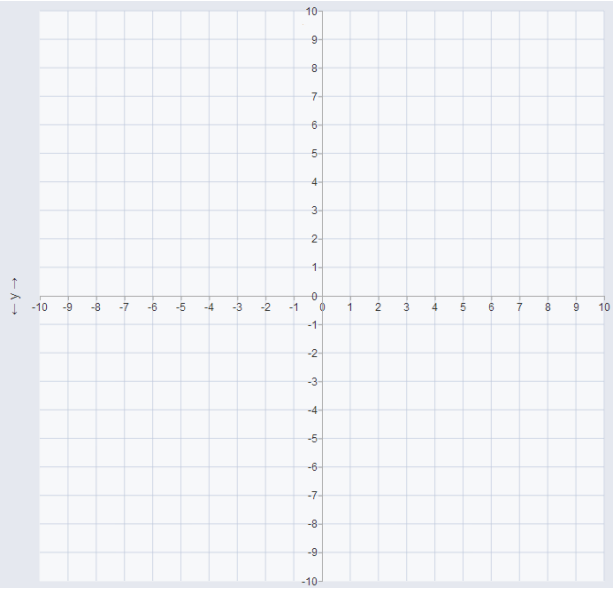
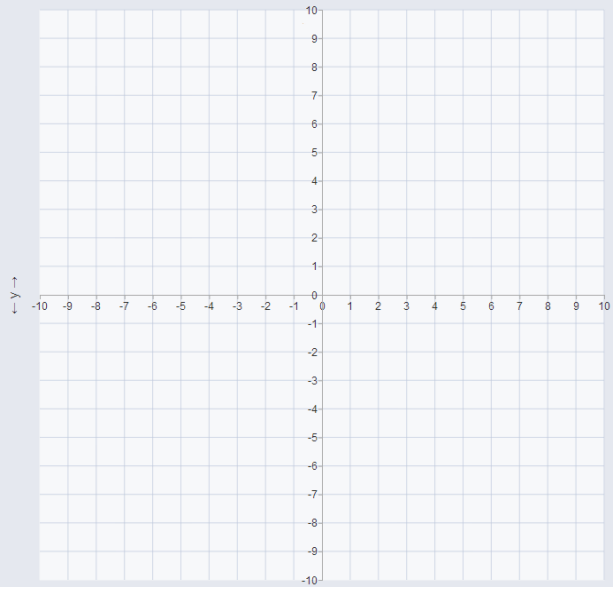
Name_____ Graphing Exponential Equations
Date_____ Check-In Worksheet

Graph the following exponential functions. Identify if it is an exponential growth function or an exponential decay function.

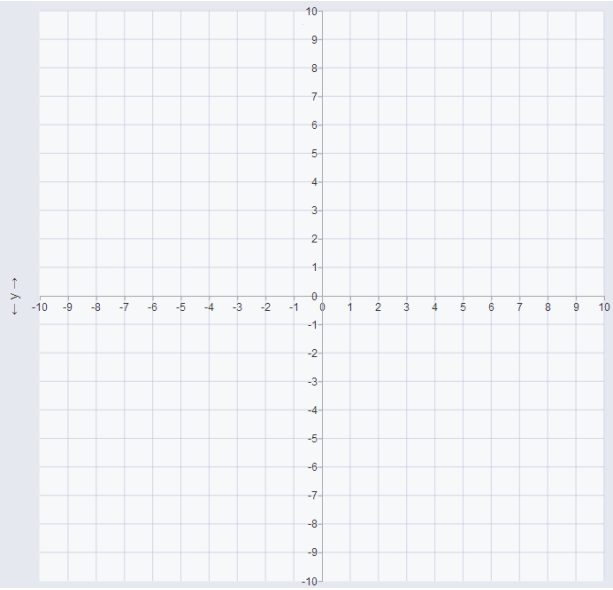
1. $f(x) = 3 \cdot 2^{x-1}$



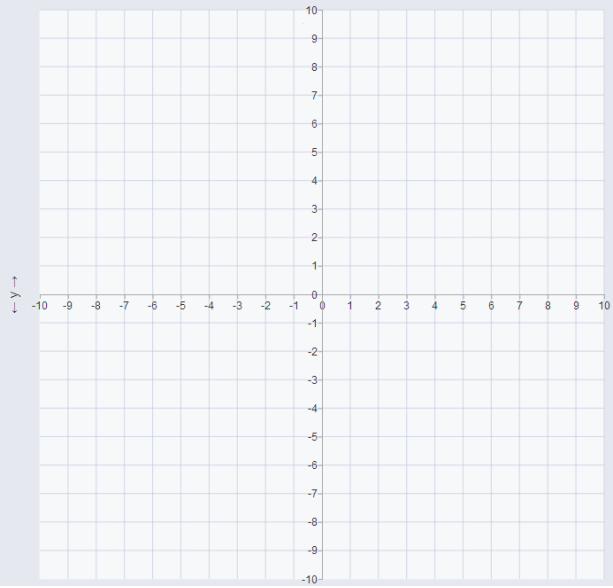
2. $f(x) = \frac{1}{2} \cdot 3^x - 2$



3. $f(x) = \left(\frac{1}{4}\right)^{x+2} - 4$



4. $f(x) = (0.8)^x + 1$



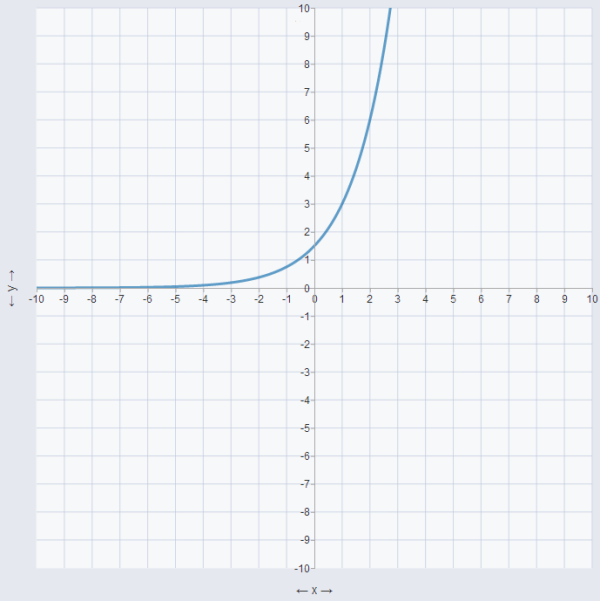
Identify the transformations of the following functions based on the parent function $\boldsymbol{f(x) = 2^x}$.

5. $f(x) = \frac{1}{5} \cdot 2^{x-7} + 5$

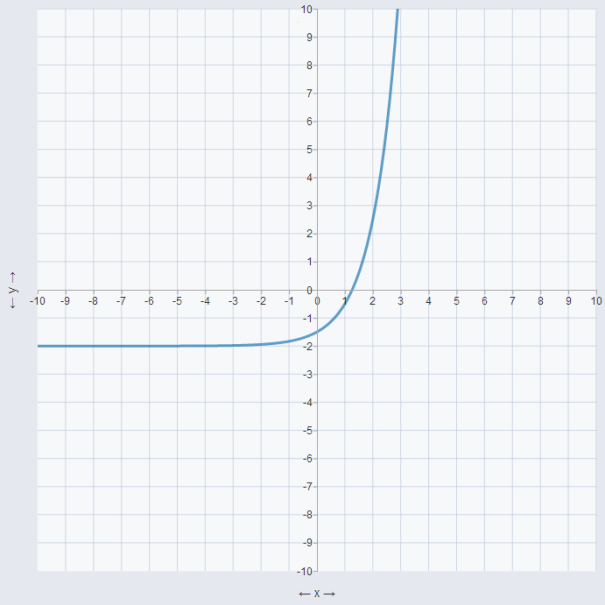
6. $f(x) = -3 \cdot 2^{-x} - 1$

Answer Key:

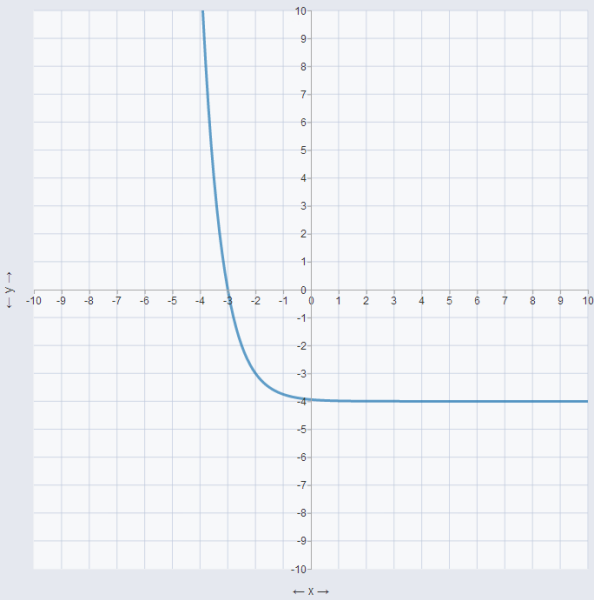
1. Growth



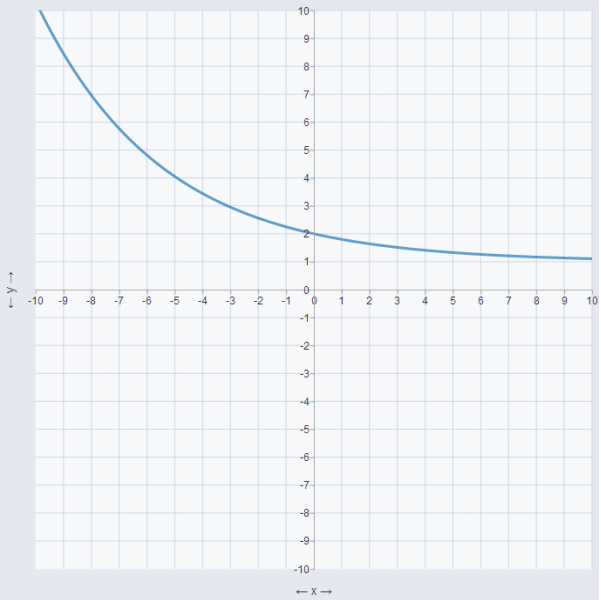
2. Growth



3. Decay



4. Decay



5. Vertical compression, horizontal translation right 7 units, and vertical translation up 5 units.

6. Reflection over the x-axis, vertical stretch, reflection over the y-axis, and vertical translation down 1 unit.