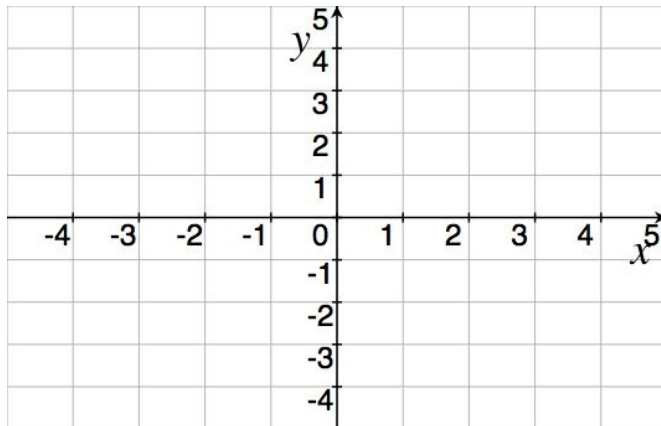# Exponential Functions

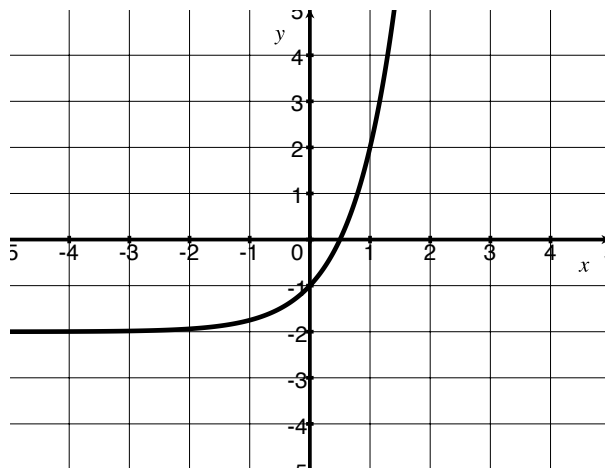1. Graph $f(x) = 3^x$.

2. What graph transformations are needed to transform $f(x) = 3^x$ into

   (a) $a(x) = 2 \cdot 3^x$

   (b) $b(x) = 4 \cdot 3^x + 1$

   (c) $c(x) = 3^{x+2}$

3. Given that $g(x)$ is an exponential
   function of the form $y = b^x$ that
   has been vertically shifted and
   is graphed below.
   Find the equation.

4. Assume you have $10,000 and a savings account offer with and effective annual interest rate of 4%. How much money would you have in the bank if the money is compounded:

   (a) annually?

   (b) twice a year?

   (c) monthly?

   (d) daily?

   (e) three times a day?