Read each problem **very carefully** before starting to solve it. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

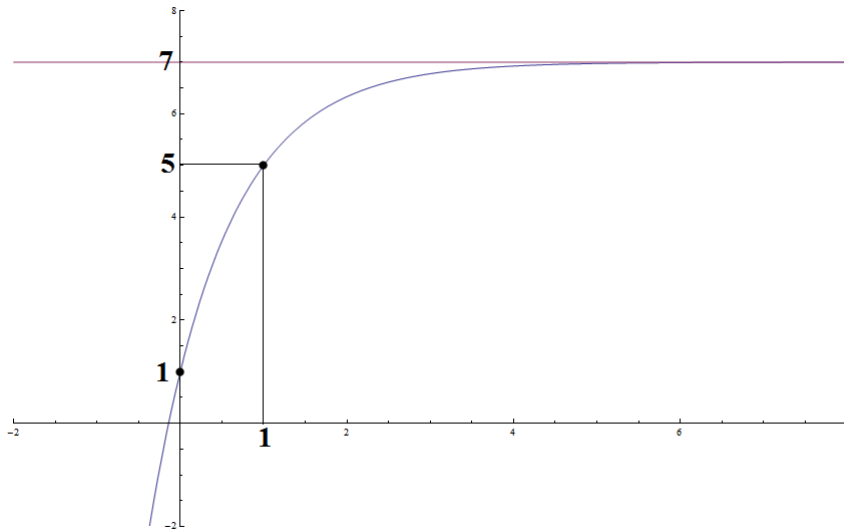1. [4 points] The graphs should be neat and points shown should be labeled!

   (a) Create a small table of values and sketch the graph of $y = (\frac{1}{3})^x$.

   (b) Create a small table of values and sketch the graph of $y = \log_5(x)$.

   (c) Give a general formula for the function $y = f(x)$ that results from $y = (\frac{1}{3})^x$ after a shift right by c, a vertical stretch by a and a shift up by d.

   (d) Give a general formula for the function $y = g(x)$ that results from $y = \log_5(x)$ after a shift right by c, a vertical stretch by a and a shift up by d.

2. [4 points] The following graph has parent function $y = (\frac{1}{3})^x$. Find a possible formula $y = f(x)$ for it.

3. [4 points] The following graph has parent function $y = \log_5(x)$. Find a possible formula $y = g(x)$ for it.