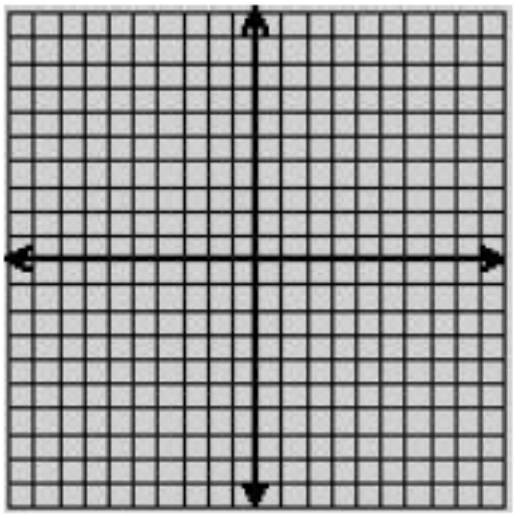
Worksheet B: Comparing Parameter Changes in Exponential Functions

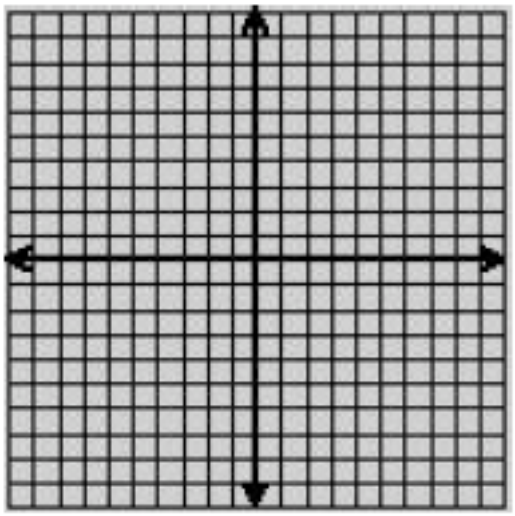
1. Graph: $f(x) = 2^x$ in red pen,
   $g(x) = 2^{x-3}$ in black pen, and
   $h(x) = 2^{x+3}$ in blue pen.



   a. How does "subtracting 3 from the exponent" in the graph of g(x) compare to the graph of $f(x) = 2^x$?

   b. How does "adding 3 to the exponent" in the graph of h(x) compare to the graph of $f(x) = 2^x$?

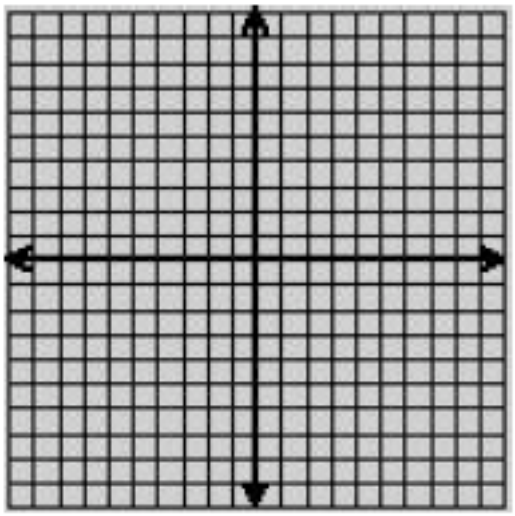
2. Graph: $f(x) = 2^x$ in red pen,
   $g(x) = 2^x + 1$ in black pen, and
   $h(x) = 2^x - 3$ in blue pen.



a. How does "adding 1" in the graph of g(x) compare to the graph of $f(x) = 2^x$?

b. How does "subtracting 3" in the graph of h(x) compare to the graph of $f(x) = 2^x$?

3. Graph: $f(x) = 2^x$ in red pen,
   $g(x) = 3(2^x)$ in black pen, and
   $h(x) = 1/3(2^x)$ in blue pen.



   a. How does "multiplying by a factor of 3" in the graph of g(x) compare to the graph of $f(x) = 2^x$?

   b. How does "multiplying by a factor of 1/3" in the graph of h(x) compare to the graph of $f(x) = 2^x$?