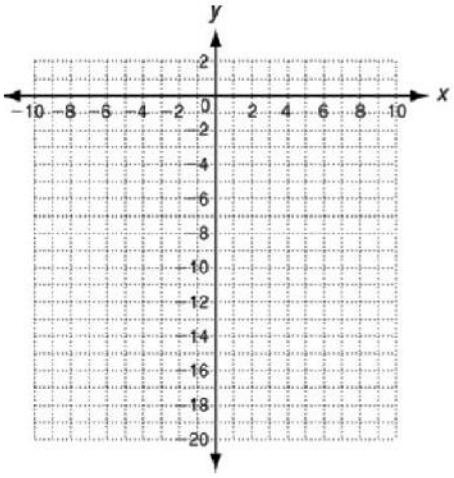
13.1-13.4 CW: Exponential Growth/Decay, e, and interest

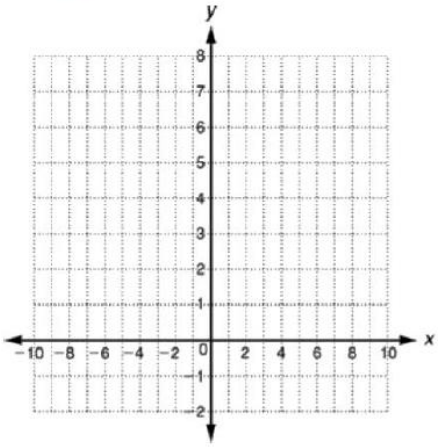
1. Using the general equation $f(x) = a(b)^x$, find the equation for the values given in the table.

x	-2	0	2	4
$f(x)$	84	21	5.25	1.3125

2. Graph: $y = -(0.5)^{x+3} - 3$



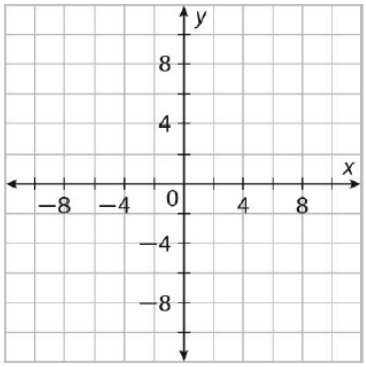
3. Graph: $y = \frac{1}{2}(2)^{x-1} + 3$



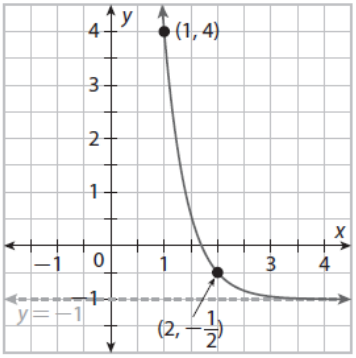
4. Given the function $f(x) = 3^x$, describe the transformations that have occurred by:
$g(x) = -2f(x-3) + 5$

5. Given the function $f(x) = 3^x$, describe the range and end behavior for $g(x) = -f(x-4) + 2$

6. Graph: $f(x) = 2(e)^{x-2} + 1$. Label your reference points.



7. Given the graph write the equation in the form:
$f(x) = a(b)^{x-h} + k$



8. How much will you have if you invest $2000 at a rate of 4.5% compounded monthly for 6 years.

9. How much will you make if you invest $2000 at a rate of 4.5% compounded continuously for 6 years.

10. How much do you earn if you invest $4000 at a rate of 6% simple interest for 4 years.