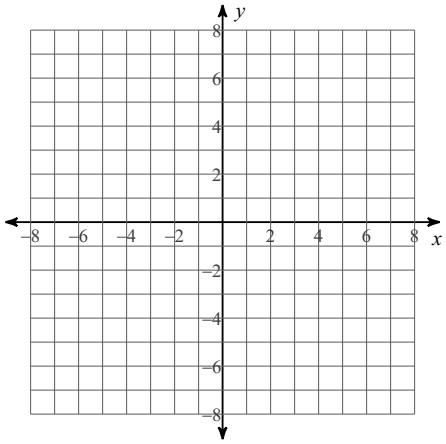
Trig/Precalculus Home Instruction Mrs. Bledsoe Name_____

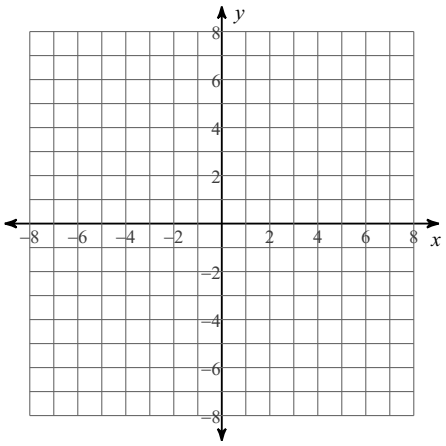
4th Period - Transformations of Functions April 13, 2020 Period____

Sketch the graph of each function.

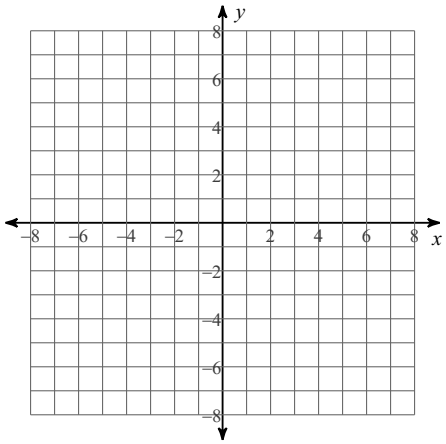
1) $g(x) = -(x-3)^2$



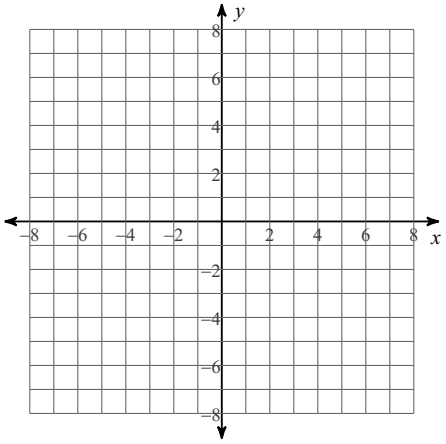
2) $g(x) = \dfrac{1}{2(x+1)}$



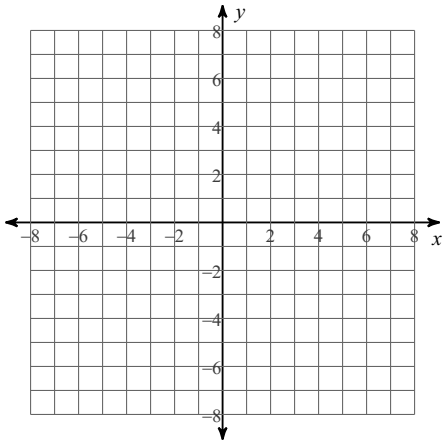
3) $g(x) = (3x)^2 + 2$



4) $g(x) = 2\sqrt{x+1}$



5) $g(x) = \dfrac{1}{3}(x+2)^2$



Transform the given function $f(x)$ as described and write the resulting function as an equation.

6) $f(x) = x^2$
reflect across the x-axis
translate up 2 units

7) $f(x) = \sqrt{x}$
reflect across the y-axis
reflect across the x-axis
translate down 1 unit

8) $f(x) = \frac{1}{x}$
reflect across the x-axis
translate down 3 units

9) $f(x) = \sqrt{x}$
translate right 3 units
translate down 2 units

10) $f(x) = x^2$
compress vertically by a factor of 2
reflect across the x-axis