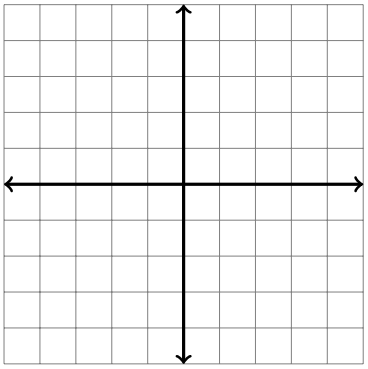
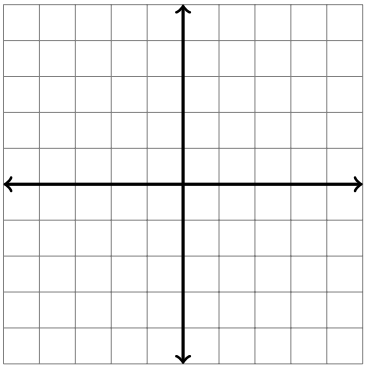
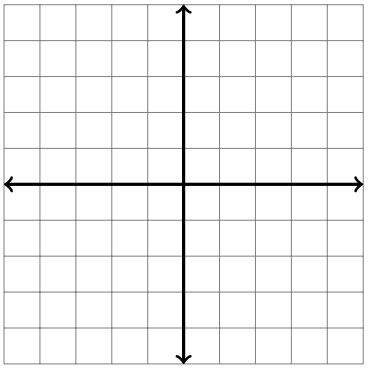
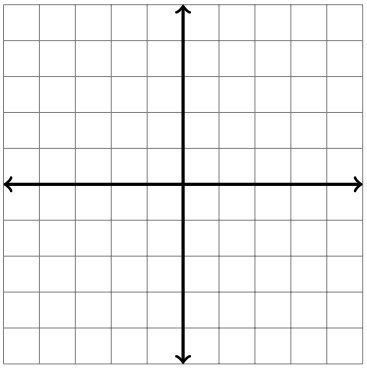
Math 1140F - Fall 2014 Name:_____

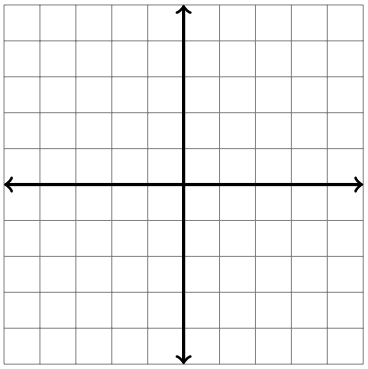
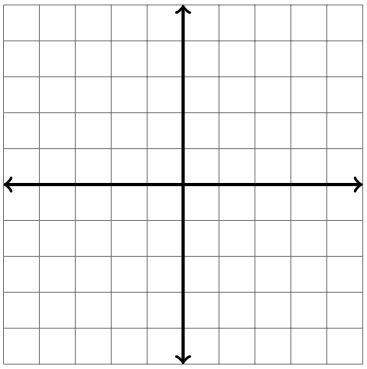
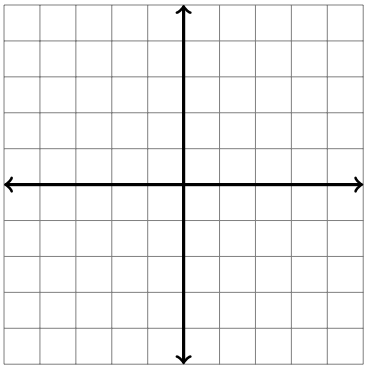
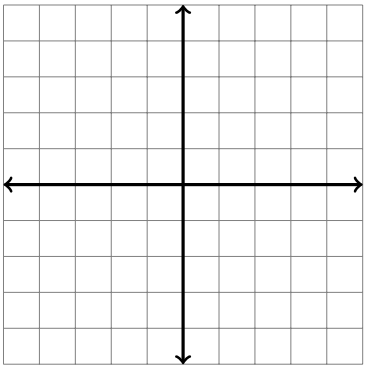
Quiz 3 – Take Home

1. Graph the following equations using the method of transformations. Be sure to clearly label each graph with its equation and label three points on the final graph. Also give the domain and range.

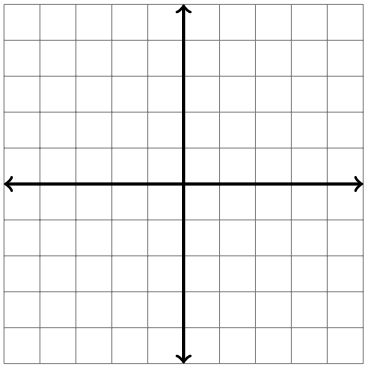
   (a) $g(x) = 2\sqrt{x-2}+1$

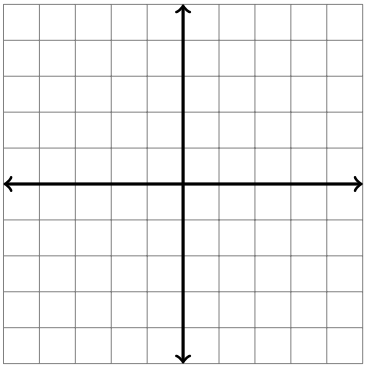





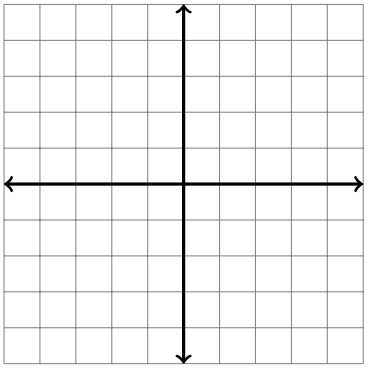
   (b) $f(x) = 2(x+1)^2 - 3$

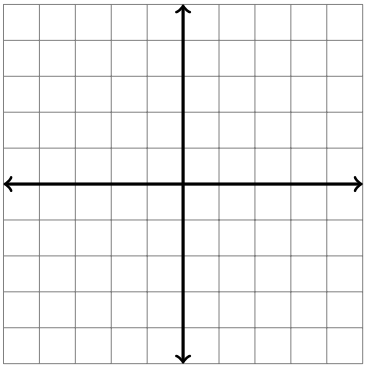





(c) $h(x) = \frac{4}{x} + 2$









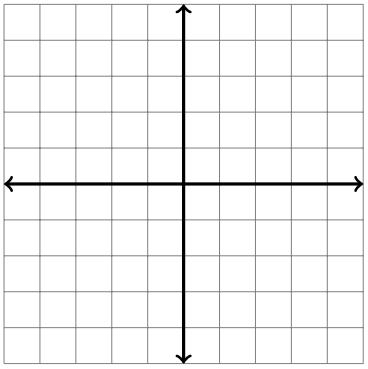
2. Consider the following piecewise-defined function:

$$F(x) = \begin{cases} 2 - x & \text{if } -3 \leq x < 1 \\ \sqrt{x} & \text{if } x > 1 \end{cases}$$

(a) State the domain.

(b) List any intercepts.

(c) Graph $F(x)$. Be sure to label any intercepts.



(d) Using the graph, state the range.

(e) Is $F(x)$ continuous? State why or why not.