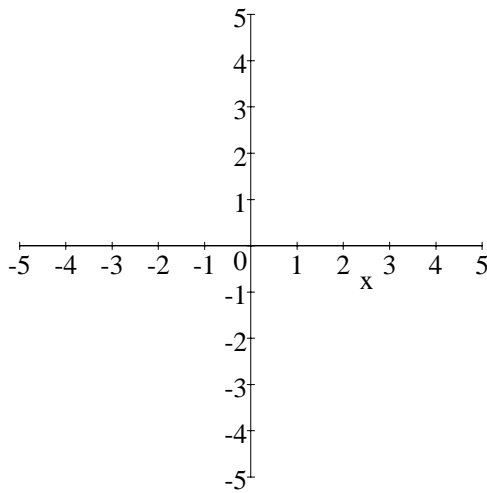


5. Find an equation for the line through the points $(2, -2)$ and $(4, 2)$.

6. The graph of $y = g(x)$ appears below. Use it to determine the domain and the range of the function g .



Domain: _____

Range: _____

7. Determine if each function is even, odd, or neither. (This counts as *one* problem).

a. $f(x) = 5|x|$

b. $g(x) = 5x$

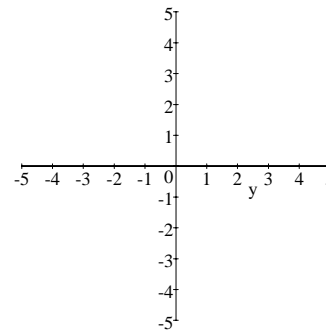
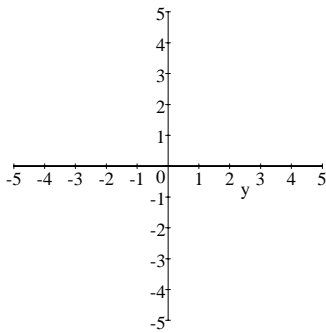
c. $h(x) = 3x^2 + 4$

d. $p(x) = 4x^2 + 3x + 1$

8. Recall what the graph of $f(x) = |x|$ looks like (if you don't know, I'll give it to you and deduct 5 points from your score). For each function given below,
- describe how to graph the given function by modifying the graph of f and then
 - sketch the graph of the given function.

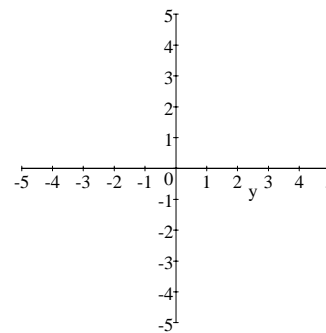
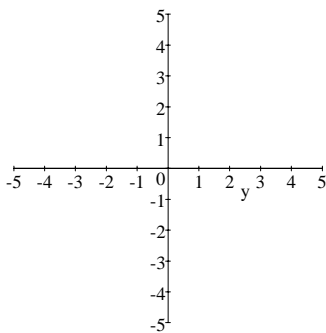
a. $g(x) = |x - 2|$

b. $h(x) = |x| + 2$



c. $p(x) = -|x|$

d. $q(x) = 4 - |x + 2|$

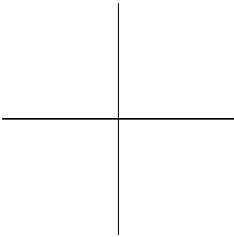
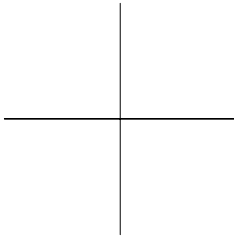
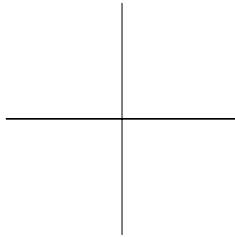


9. If $f(x) = x^2 + 3$ and $g(x) = \sqrt{x-4}$, find $(f/g)(x)$ and determine its domain.

10. If $f(x) = 3x + 2$ and $g(x) = 2x - 3$, find $f \circ g$ and $g \circ f$. You should clearly identify which is which.

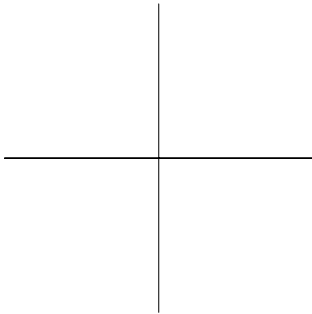
11. Show algebraically that $f(x) = 5 - 4x$ and $g(x) = \frac{5-x}{4}$ are inverses.

12. Determine whether or not the function represented by each graph has an inverse function. (This counts as *one* problem).

<p>a.</p> 	<p>b.</p> 	<p>c.</p> 
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13. Find a formula for $g^{-1}(x)$ if $g(x) = \frac{5x+3}{4}$.

14. Sketch the graph of the quadratic function $q(x) = x^2 - 6x + 13$, identifying the vertex and x -intercepts.



15. Use the graph of $f(x) = 2^x$ to describe the transformation that yields the graph of $g(x) = -2^x + 3$.

16. Use your calculator to evaluate the expression $e^{-5/2}$.