

name: _____

Assignment 1

Math621B

due September 29, 2021

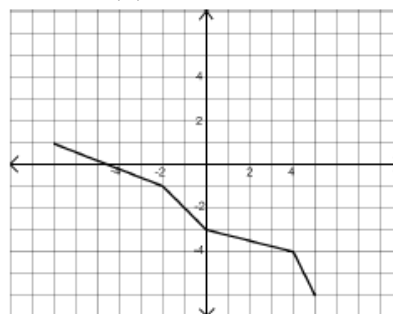
1. The graph of $f(x) = |x|$ is expanded vertically by a factor of 2, reflected in the y-axis, translated 4 units to the right, and translated 3 units upward. Write the equation of the transformed function.

2. The graph of $f(x) = x^2$ is compressed horizontally by a factor of 4, reflected in the x-axis, and translated 5 units down. Write the equation of the transformed function.

3. Describe the graph of $y = -3f(2x) - 1$ compared to the graph of $y = f(x)$.

4. The graph of $y = \sqrt{x}$ is compressed vertically by a factor of $\frac{1}{4}$, translated 3 units to the left, and translated 4 units downward. Determine the equation of the transformed function.

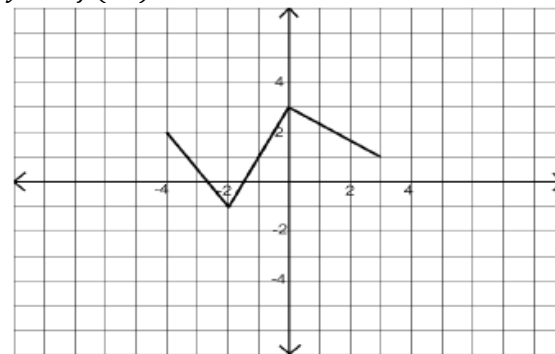
5. Given the graph for $y = f(x)$, draw the graph of $y = f^{-1}(x)$



6. Given the table of values for $y = f(x)$ construct a table of values for $y = 3f(-(x + 3)) - 1$

x	y		
1	-2		
3	3		
4	5		
10	4		

7. Given the graph of $y = f(x)$ draw the graph for $y = 2f(2x)$



8. Given the function $f(x) = \frac{1}{4}x^3 + 1$, give the equation for $f^{-1}(x)$.