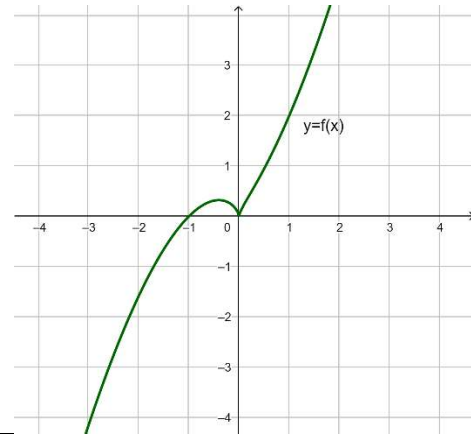


Math 146 extra problems:

1. Given that the function $f(x)$ is shown, graph each of the following:



<p>a. $y = -f(x)$ is an up-down reflection</p>	<p>b. $y = f(-x)$ is a left-right reflection</p>	<p>c. $y = f(x+2)+1$ is a shift with new center $(-2,1)$</p>
<p>d. $y = 2f(x)$ stretch twice as high (twice as far from the x-axis)</p>	<p>e. $y = -f(x-3)+2$ flip up-down and graph with new center $(3,2)$</p>	<p>f. $y = f(-x)-2$ flip left right, and graph from new center $(0,-2)$</p>

Solve each equation for x :

$$2. \frac{x-4}{x^2+5x+6} = \frac{x-2}{x^2+4x+3} - \frac{5}{x^2+3x+2}$$

$$3. \frac{3x}{x^2+5x+6} + \frac{2}{x^2+x-2} = \frac{5x}{x^2+2x-3}$$

$$4. \frac{5}{x^2-9} + \frac{x-1}{x^2+3x} = \frac{x+2}{x^2-3x}$$