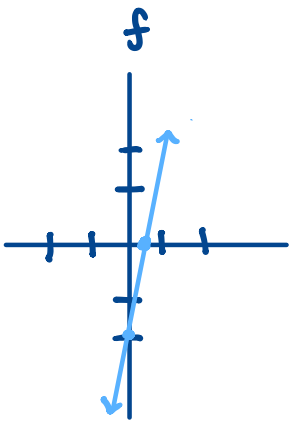
1. Take f to be the function that is given by

$$f(x) = 4x - 2.$$

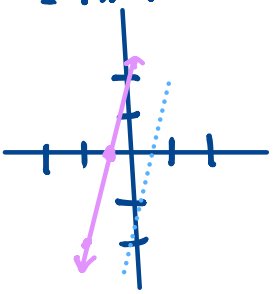
Find equations for the functions given by $R(f)$, $M_y(f)$, and $M_x(f)$ and sketch f along with these transformed functions.



$R(f) = -f(-x)$

$= -(4(-x) - 2)$

$= 4x + 2$

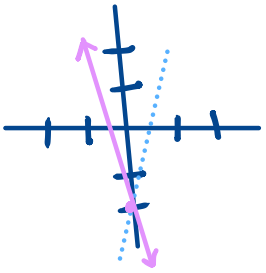


Rotation by half a circle

$M_y(f) = f(-x)$

$= 4(-x) - 2$

$= -4x - 2$

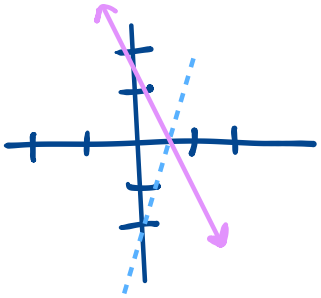


Reflect over y-axis

$M_x(f) = -f(x)$

$= -(4x - 2)$

$= -4x + 2$

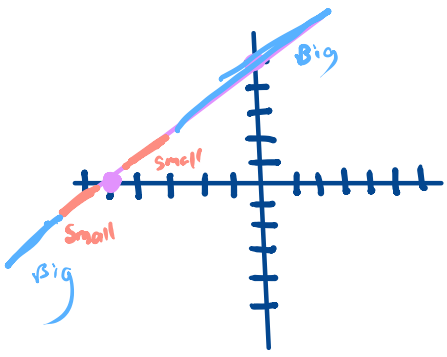


Reflect over x-axis

2. Sketch the function f, where

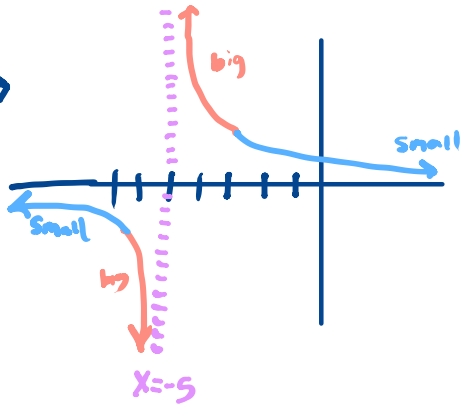
$$f(x) = \frac{1}{(x+5)}.$$

$g(x) = x + 5$



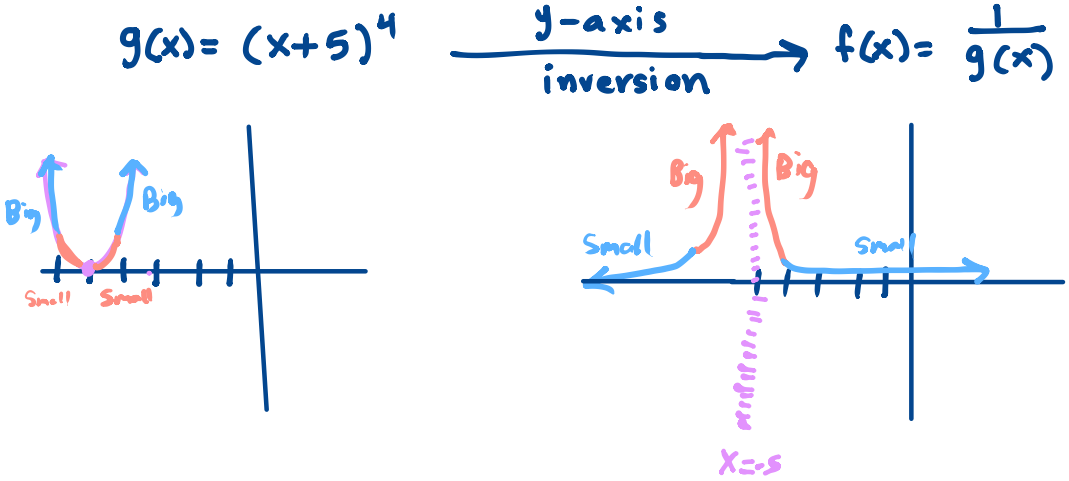
y-axis inversion

$f(x) = \frac{1}{g(x)}$



3. Sketch the function f, where

$$f(x) = \frac{1}{(x+5)^4}.$$



4. Define $\text{Recip}(x) = \frac{1}{x}$. Use y-axis inversion to sketch $\text{Recip} \circ (f)$ where f is this function: