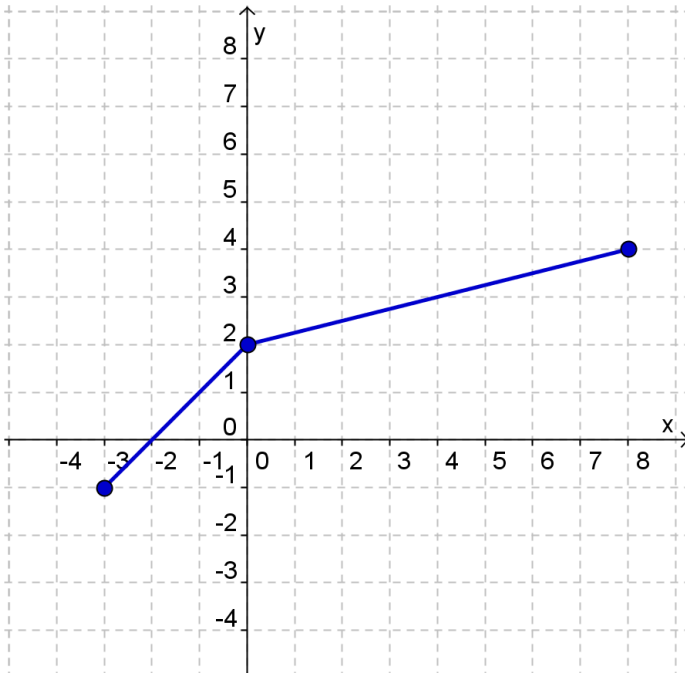


1. Let  $f(x) = \sqrt{x}$  and  $g(x) = x + 2$ . Find  $(f \circ g)(x)$ ,  $(g \circ f)(x)$ , and  $(f \circ g)(2)$

2. Are  $f(x) = \frac{3}{x-4}$  and  $g(x) = \frac{3}{x} + 4$  inverses of each other? Show by finding  $f(g(x))$  and  $g(f(x))$ .

3. Find the inverse of  $f(x) = 3x - 1$ .

4. Draw the graph of the inverse of  $f$ .



Q: A man in a café has coffee and a fly flies into it. He calls the waiter over, who takes the coffee to the kitchen, and a few moments later returns with another cup of coffee. The man says, "This is the same cup of coffee--you just took the fly out!" How could he know?