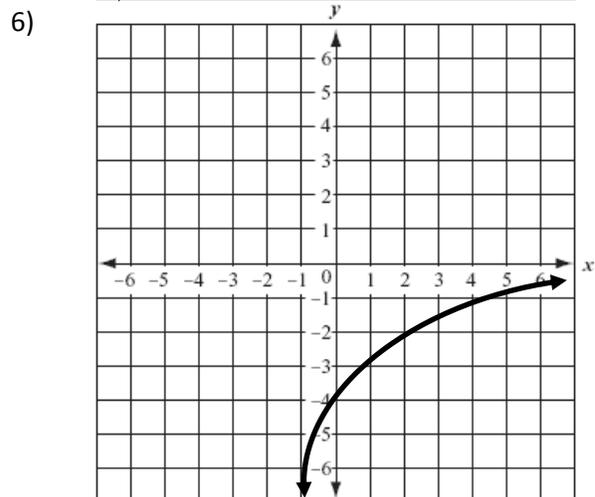
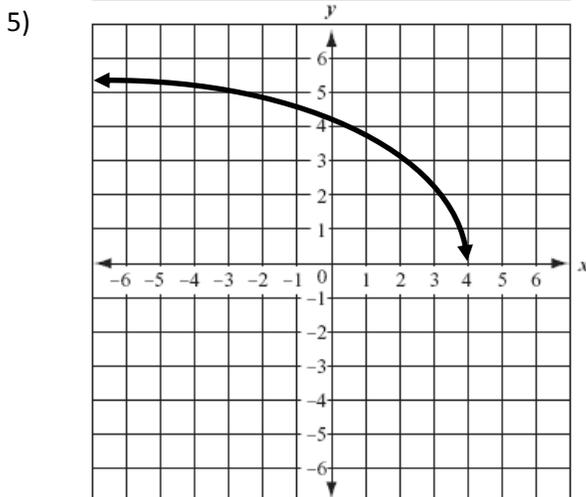
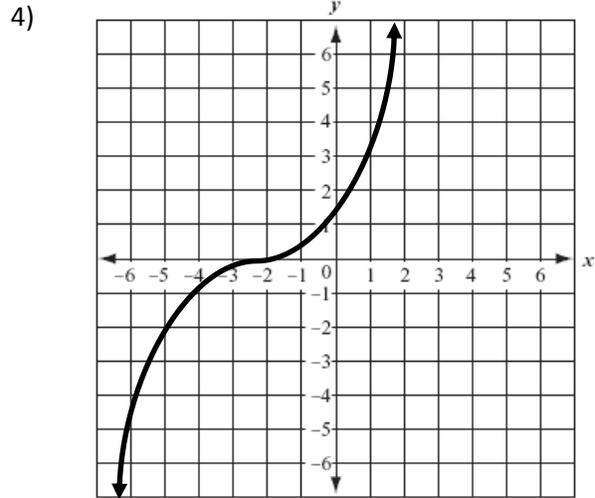
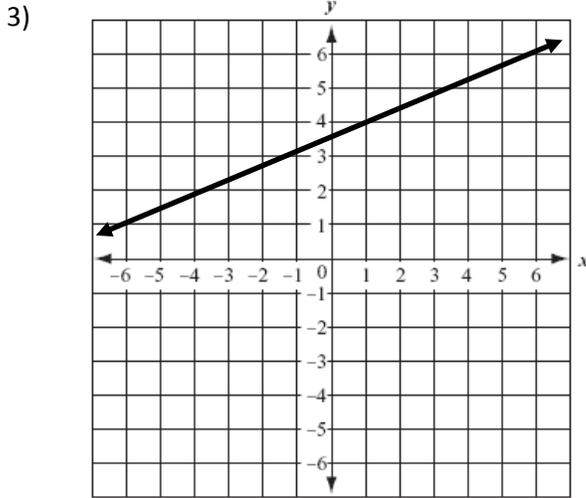


For each of the given functions for #1 and #2, algebraically determine the equations of their inverses. Verify your solutions by using a graphing calculator and your knowledge of reflections across the $y = x$ line.

1) $y = 2x + 3$

2) $y = x^2$

Given the graph of a function for #3 – 6, sketch its inverse.



7) Explain in detail how the graphs of two functions can be analyzed to determine if they represent inverses of each other.

Use composition of functions, $f(g(x)) = x$, to test whether the given function pairs are inverses of each other.

8)

$$\begin{cases} f(x) = -5x \\ g(x) = -\frac{1}{5}x \end{cases}$$

9)

$$\begin{cases} f(x) = 2x + 4 \\ g(x) = \frac{1}{2}x - 2 \end{cases}$$

10)

$$\begin{cases} f(x) = \frac{9}{5}x + 32 \\ g(x) = \frac{5}{9}(x - 32) \end{cases}$$

11)

$$\begin{cases} f(x) = 2x^2 - 6 \\ g(x) = \sqrt{\frac{1}{2}x + 3} \end{cases}$$