

## Worksheet 8 - Lesson 32

**Find the inverse of each function.**

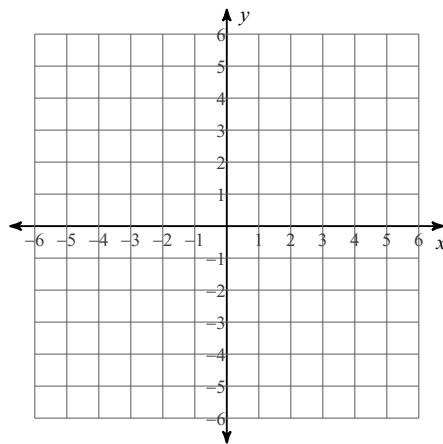
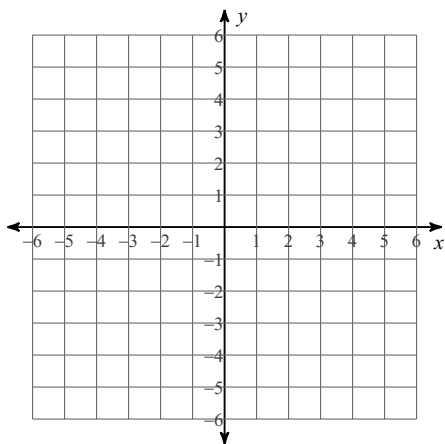
1)  $f(x) = (x + 2)^5 - 3$

2)  $f(x) = -\frac{1}{x+2} + 2$

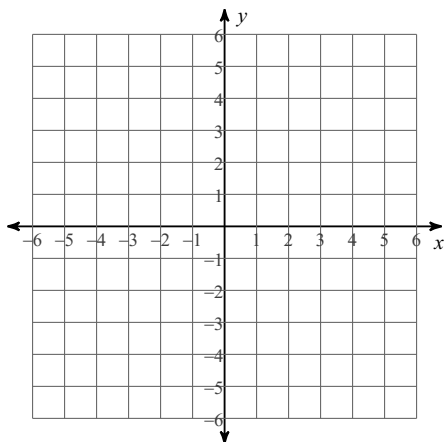
**Find the inverse of each function. Then graph the function and its inverse.**

3)  $f(x) = 5x + 5$

4)  $g(x) = -x^3 - 3$



5)  $g(x) = x - 1$



**State if the given functions are inverses.**

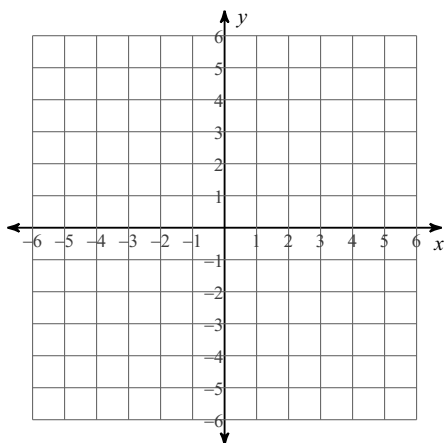
6)  $g(n) = \sqrt[3]{n - 2}$   
 $f(n) = -\sqrt[5]{n + 1}$

7)  $f(n) = \frac{4}{n}$

$g(n) = \frac{4}{n}$

**Find the inverse of each function. Then graph the function and its inverse.**

8)  $f(x) = \frac{1}{x + 3}$



9) If the point  $(2, -3)$  is on the graph of the function  $f(x)$ , then what point must be on the graph of  $f^{-1}(x)$ ?

10) If the point  $(2, -3)$  is on the graph of the function  $f(x)$ , then what point must be on the graph of  $f^{-1}\left(\frac{x}{2}\right) + 5$ ?

11) Which of the following functions have an inverse function? Explain why or why not without solving for the inverse.

(A)  $f(x) = (x - 2)^2$

(B)  $g(z) = \sqrt{z + 3}$

(C)  $h(w) = |w - 7| + 1$

(D)  $k(v) = \frac{4}{(v - 1)^2}$