

Inverses of Functions – in book: Section 3.8 p. 199

Find the inverse of each function. Then state whether the inverse is a function.

1. $f(x) = 2x$

2. $f(x) = 3x - 7$

3. $f(x) = 4(x + 2)$

4. $f(x) = 3x + 7$

5. $f(x) = x^5$

6. $f(x) = x^2 + 4$

7. $f(x) = 4x + 4$

8. $f(x) = x^3$

9. $f(x) = x^2 - 9$

Use composition to determine if the given functions are inverses of each other. Write yes or no. Show your work.

10. $f(x) = 3x - 5$
 $g(x) = \frac{x + 5}{3}$

11. $f(x) = x - 10$
 $g(x) = x + 10$

12. $f(x) = \frac{2x - 3}{5}$
 $g(x) = \frac{3x - 5}{3}$

13. $f(x) = 5x - 6$
 $g(x) = \frac{x + 6}{5}$

14. $f(x) = x + 5$
 $g(x) = x - 5$

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