

Find the inverse of each function algebraically.

1. $h(x) = 5x^2$

2. $j(x) = \frac{1}{x} - 2$

3. $k(x) = 2x^3 + 3$

4. $m(x) = \sqrt[5]{x-9}$

5. $n(x) = \frac{3}{2x}$

6. $p(x) = (x-1)^3 + 2$

7. $r(x) = 3x^2 - 4$

8. $w(x) = x^{\frac{3}{5}}$

9. Given $f(x) = 9 - 2x$, find $f^{-1}(1)$

10. Given $g(x) = \frac{x+3}{4}$, find $g^{-1}(-2)$

11. Given $h(x) = 3\sqrt{x}$, find $h^{-1}(2)$

12. Given $k(x) = \frac{2}{x-1} + 3$, find $k^{-1}(-1)$

For each of the graphs:

a. Is the original a function?

b. Is the inverse a function?

c. Sketch the inverse.

