

Determine if the given function has an inverse. If the function has an inverse then determine the inverse for the function. If the function is not one-to-one, restrict the domain of the function and then determine the inverse for the function on the restricted domain.

1. $f(x) = 5x$

2. $g(x) = 3x - 4$

3. $h(x) = x^3$

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

5. $k(x) = \frac{2-x}{3+x}$

6. $m(x) = x^2$

7. $n(x) = 5 - 2x^2$

8. $p(x) = 3x^2 - 6x + 7$

Sketch the graph of the function and its inverse.

1. $m(x) = x^2$

2. $g(x) = 3x - 4$

3. $f(x) = 5x$