

Inverse Functions and Restricted Domains



Name: _____ Date: _____

Use the material to work through each task. Show the requested response.

Reverse the mapping

An inverse reverses a one-to-one function's mapping. For $f(x) = 2x + 3$, the inverse is $(x - 3)/2$. The rule x^2 requires a restricted domain to have an inverse function.

1. For $f(x) = 2x + 3$, find $f(4)$.

2. For its inverse, find $f^{-1}(11)$.

3. Find the inverse of $g(x) = 3x - 6$.

4. Evaluate $g^{-1}(g(5))$.

5. Why does x^2 over all real numbers fail the one-to-one condition?

6. Restrict x^2 to $x \geq 0$. What inverse rule and domain are appropriate?
