

## 4.5 Composition and Inverse of Radicals Homework

Find $[g \circ h](x)$ and $[h \circ g](x)$ .	$[g \circ h](x)$ also written as $g(h(x))$	$[h \circ g](x)$ also written as $h(g(x))$
1. $g(x) = x - 3$ $h(x) = x^2$		
2. $g(x) = 5x$ $h(x) = x^2 + x - 1$		
3. $g(x) = \sqrt{x+2}$ $h(x) = 2x^2 - 3$		

**Find the inverse of each function.**

4.  $y = 4(x-3)^2$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

5.  $y = (x+3)^2 - 2$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

6.  $y = \frac{(x+6)^2}{16} = \frac{1}{16}(x+6)^2$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

7.  $y = \sqrt{x} + 5$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

8.  $y = \sqrt{x-9}$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

9.  $y = \sqrt{x+1} - 5$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

10.  $y = 2\sqrt{x-3} + 6$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

11.  $y = \sqrt{2x+3}$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range:

12.  $y = -\sqrt{x-4}$

Domain:

Range:

Find Inverse:

Inverse Domain:

Inverse Range: