

SM3-A HW #6-6 (Solve Eq's Using Inverse Functions)**Solve each equation. Remember to check for extraneous solutions.**

1) $5 + \sqrt{2k - 9} = 8$

2) $-7 + \sqrt{r + 4} = 2$

3) $-1 + \sqrt{1 - p} = 2$

4) $12 = 9 + \sqrt{x - 9}$

5) $-5 + \sqrt{4 - 3x} = 0$

Solve each equation.

6) $n^{\frac{3}{2}} = 512$

7) $243 = n^{\frac{5}{3}}$

8) $3(b - 23)^{\frac{5}{3}} = 729$

9) $81 = 3(m + 16)^{\frac{3}{4}}$

10) $(9x)^{\frac{3}{4}} + 2 = 29$

Solve each equation by taking square roots.

11) $-2 - 4x^2 = -386$

12) $2n^2 - 5 = 157$

13) $3v^2 + 10 = -41$

Perform the indicated operation.

14) $h(t) = 3t - 3$
 $g(t) = -3t + 2$
Find $(h \circ g)(t)$

15) $g(n) = n - 3$
 $h(n) = n^2 - 1$
Find $(g \circ h)(3)$

16) $g(n) = 4n - 3$
 $h(n) = 3n - 2$
Find $(g + h)(8)$

17) $g(a) = -a^3 - 3a$
 $h(a) = 2a - 5$
Find $\left(\frac{g}{h}\right)(2)$

Find the inverse of each function.

18) $f(x) = \frac{4}{-x + 1} + 2$