HW#___ Name:_____

Inverse Functions

Use a composition of functions to verify whether the following functions are inverses or not. Make sure to show all your work.

1) $g(x) = 4 - \frac{3}{2}x$

$f(x) = \frac{1}{2}x + \frac{3}{2}$

2) $g(n) = \frac{-12 - 2n}{3}$

$f(n) = \frac{-5 + 6n}{5}$

3) $f(n) = \frac{-16 + n}{4}$

$g(n) = 4n + 16$

4) $f(x) = -\frac{4}{7}x - \frac{16}{7}$

$g(x) = \frac{3}{2}x - \frac{3}{2}$

5) $f(n) = -(n+1)^3$

$g(n) = 3 + n^3$

6) $f(n) = 2(n-2)^3$

$g(n) = \frac{4 + \sqrt[3]{4n}}{2}$

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

$h(x) = -\frac{1}{x+3}$

8) $g(x) = -\frac{2}{x} - 1$

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

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Inverse Functions

Find the inverse of each function.

13) $g(x) = \frac{7x + 18}{2}$

14) $f(x) = x + 3$

15) $f(x) = -x + 3$

16) $f(x) = 4x$

9) $h(x) = \sqrt[3]{x} - 3$

10) $g(x) = \frac{1}{x} - 2$

11) $h(x) = 2x^3 + 3$

12) $g(x) = -4x + 1$