7.4 HOMEWORK Inverse Functions

Solve.

1. Is $g(x) = \frac{1}{2}x - 2$ the inverse of $f(x) = 2x + 4$? Justify your answer.
2. Is $g(x) = 4x + 24$ the inverse of $f(x) = \frac{1}{4}x + 6$? Justify your answer.
3. Is $h(x) = x^2 - 2$ the inverse of $g(x) = \sqrt{x+2}$? Justify your answer.
4. Is $h(x) = x^2$ the inverse of $g(x) = \sqrt{x}$? Justify your answer.

Find the inverse of the given function.

5. $f = \{(1,3),(2,-5),(3,6)\}$
6. $g = \{(-4,1),(-3,2),(0,0),(1,10)\}$
7. $h = \{(-1,-1),(0,0),(3,3),(6,6)\}$
8.

x	y
-3	-2
-1	2
0	4
1	6
3	8

9.

x	y
-3	0
1	2
6	3
13	4
22	5

10. $f(x) = 3x - 7$
11. $g(x) = -4x + 5$
12. $h(x) = \frac{2}{5}x + 6$
13. $f(x) = \frac{3x+4}{7}$
14. $g(x) = \frac{1}{4}x + 6$
15. $g(x) = -3x - 10$
16. $f(x) = \sqrt{x-4}$
17. $g(x) = \sqrt{2x+8}$
18. $h(x) = \sqrt{3x} - 6$
19. $f(x) = 4\sqrt{x}$