

## Functions Practice Quiz

**Evaluate each function.**

1)  $h(n) = n^2 - 5$ ; Find  $h(2)$

2)  $w(t) = 3t^2 - 5$ ; Find  $w(8)$

3)  $g(x) = x^2 - 3$ ; Find  $g(5)$

4)  $k(a) = a^2 + 4a$ ; Find  $k(-10)$

5)  $h(n) = n^2 + 3$ ; Find  $h(1 + n)$

6)  $f(x) = 2x + 1$ ; Find  $f(x^2)$

7)  $w(x) = 2x - 3$ ; Find  $w(z + 3)$

8)  $g(n) = 2n$ ; Find  $g(4 + n)$

**Perform the indicated operation.**

9)  $h(x) = x^2 + 3$   
 $g(x) = x + 2$   
Find  $(h - g)(8)$

10)  $g(x) = 2x - 2$   
 $h(x) = 3x + 1$   
Find  $g(0) \div h(0)$

11)  $h(n) = 3n + 1$   
 $g(n) = 3n^2 - 5$   
Find  $(h + g)(-1)$

12)  $h(t) = 3t + 5$   
 $g(t) = 2t^2 - 2$   
Find  $h(5) - g(5)$

13)  $h(n) = 4n + 5$   
 $g(n) = 2n^3 + n$   
Find  $h(2n) \div g(2n)$

14)  $g(x) = x + 2$   
 $h(x) = x^3 - 5$   
Find  $g(x^2) \div h(x^2)$

15)  $f(x) = 2x - 4$   
 $g(x) = x^3 + 5$   
Find  $f(2x) - g(2x)$

16)  $h(a) = -4a + 2$   
 $g(a) = -3a^2 + a$   
Find  $(h \cdot g)(y^2)$

**Find the inverse of each function.**

17)  $f(x) = 3x - 1$

18)  $f(x) = 2 + (x - 2)^3$

19)  $g(x) = \sqrt[3]{x} - 2$

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

State if the given functions are inverses.

$$21) f(x) = -\frac{2}{x-2} - 1$$
$$g(x) = \frac{4}{x-2} + 1$$

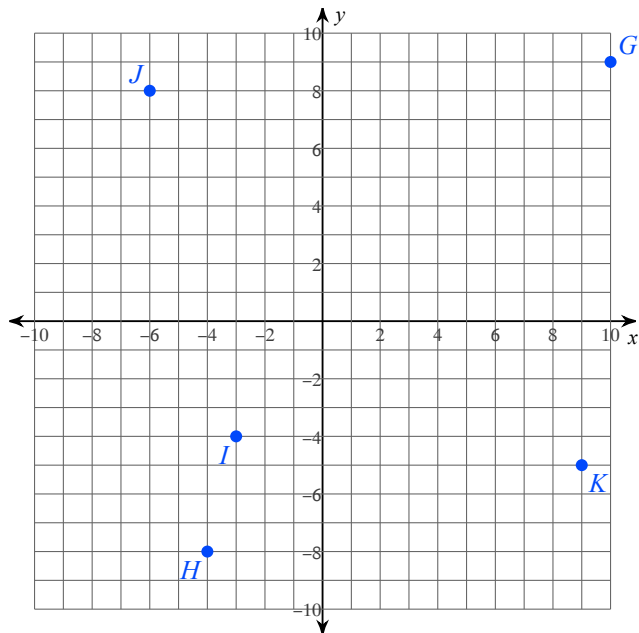
$$22) f(x) = \sqrt[5]{-x+1}$$
$$h(x) = -x^5 + 1$$

$$23) f(x) = 2(x+1)^3$$
$$g(x) = \frac{-2 + \sqrt[3]{4x}}{2}$$

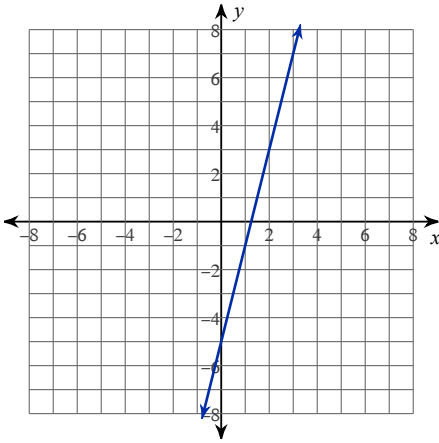
$$24) g(x) = \frac{5x+20}{7}$$
$$f(x) = -2 + \frac{1}{3}x$$

Graph the inverse of each function.

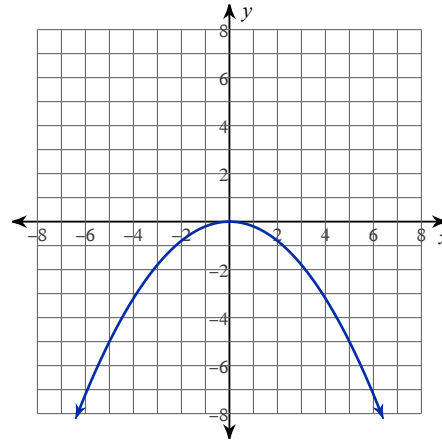
25)



26)



27)



Find the domain and range of each function.

$$28) f(x) = \sqrt[5]{x} + 2$$

$$29) g(x) = -(x - 2)^8$$

$$30) f(x) = \frac{3}{x - 2} + 2$$

$$31) g(x) = \frac{2}{x + 1}$$

$$32) f(x) = \frac{-4 - \sqrt[6]{4x}}{2}$$

$$33) h(x) = -\frac{4}{-x + 2} + 1$$