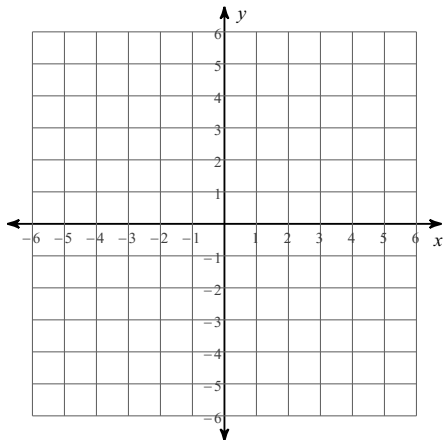


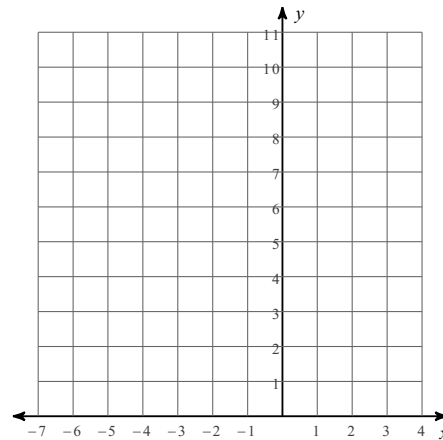
U7 Functions Review

A. State the parent function.**B. Graph each equation.****C. State the domain and range of the function.**

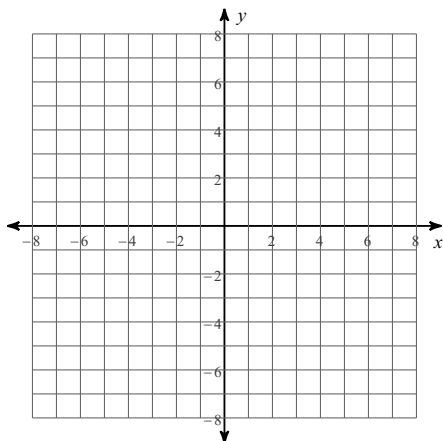
1) $y = |x + 1| + 3$



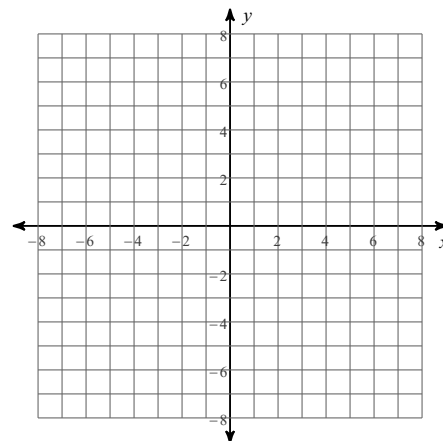
2) $f(x) = 2(x + 4)^2 + 2$



3) $y = \sqrt[3]{x + 1} + 1$



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

**Evaluate each function.**

5) $g(x) = x^2 - 2$; Find $g(-1)$

6) $k(x) = 4x + 2$; Find $k(-3)$

7) $k(x) = x^2 + 4$; Find $k(5)$

8) $p(t) = 2t - 2$; Find $p(t + 2)$

9) $g(x) = -4x + 2$; Find $g(-3x)$

10) $g(n) = -3n - 1$; Find $g(-4n)$

Perform the indicated operation.

11) $g(n) = -n - 1$
 $h(n) = n + 1$
Find $(g \circ h)(n)$

12) $g(x) = x^2 - 4$
Find $(g \circ g)(x)$

13) $g(n) = -2n + 1$
 $f(n) = 2n^2 - 1$
Find $(g \circ f)(n)$

14) $f(x) = x^2 - 5x$
 $g(x) = 4x - 4$
Find $(f \circ g)(x)$

15) $f(x) = -x^2 - 1$
 $g(x) = 4x - 5$
Find $(f \circ g)(x)$

16) $g(t) = 2t - 3$
 $f(t) = 2t - 4$
Find $(g \circ f)(t)$

17) $h(t) = 2t - 1$
 $g(t) = t^2 + 5 - t$
Find $(h \circ g)(-6)$

18) $g(t) = 4t - 4$
 $f(t) = t - 4$
Find $(g \circ f)(9)$

19) $h(x) = -4x - 3$
 $g(x) = x^2 + 1$
Find $h(g(x))$

20) $g(n) = n^3 - 3n$
 $f(n) = 2n - 5$
Find $g(f(n))$

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

22) $g(t) = -2t^3 - 4t$
Find $g(g(t))$

23) $g(n) = 2n + 5$
Find $g(g(n))$

24) What does it mean to evaluate a function?

25) What does it mean to compose two functions?

State if the given functions are inverses.

$$26) \quad g(x) = \frac{3}{x-3}$$
$$f(x) = \frac{3}{x} + 3$$

$$27) \quad g(x) = x^5 - 1$$
$$f(x) = \sqrt[5]{x+1}$$

$$28) \quad f(n) = 3n + 3$$
$$g(n) = -1 + \frac{1}{3}n$$

$$29) \quad g(n) = -2n + 6$$
$$f(n) = 3 - \frac{1}{2}n$$

$$30) \quad g(x) = -x - 2$$
$$f(x) = -x - 2$$

$$31) \quad f(n) = -2 - \frac{3}{5}n$$
$$g(n) = -\frac{5}{3}n - \frac{10}{3}$$

Find the inverse of each function.

$$32) \quad f(x) = -\frac{2}{-x+2} - 2$$

$$33) \quad f(n) = \frac{4 + \sqrt[5]{16n}}{2}$$

$$34) \quad f(x) = \frac{1}{-x+2} - 2$$

$$35) \quad f(x) = \sqrt[3]{-x+3}$$

$$36) \quad g(n) = \frac{2}{3}n + \frac{4}{3}$$

$$37) \quad f(x) = 2x^3 + 3$$