

Determine whether the graph is an even function, odd function, or neither.

1.  $h(x) = x^2 + 1$

2.  $G(x) = 2x^5 - 10$

3.  $T(x) = |x| + 2$

4.  $k(x) = x^2 + 4x + 8$

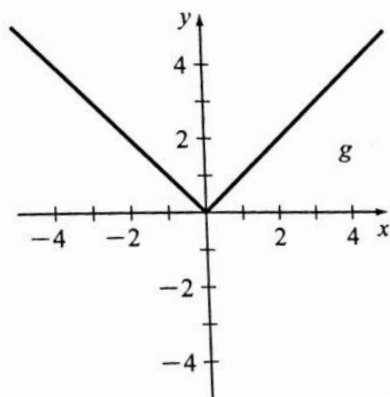
5.  $g(x) = \sqrt{3 - x^2}$

6.  $h(x) = 16x^2 + x$

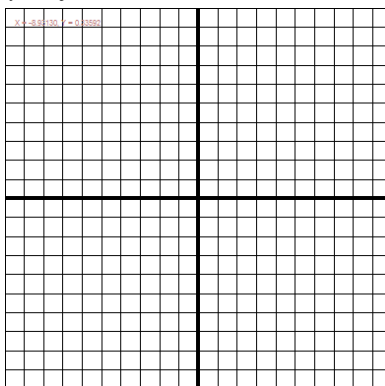
7.  $g(x) = \frac{x^3}{x^2 + 1}$

8.  $f(x) = 4x^4 + 10x$

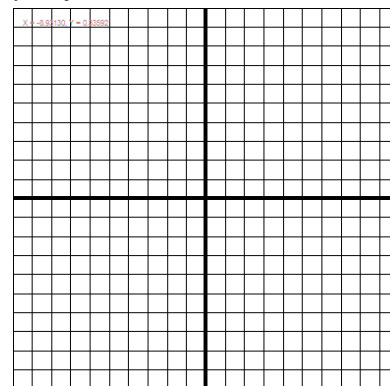
9. Use the graph of  $f$  to sketch the graph of



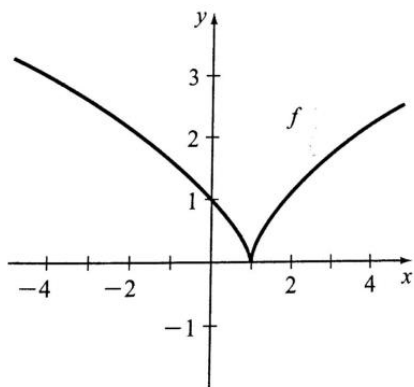
a.  $y = f(x) + 2$



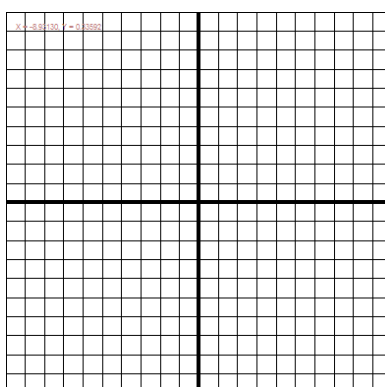
b.  $y = f(x + 2)$



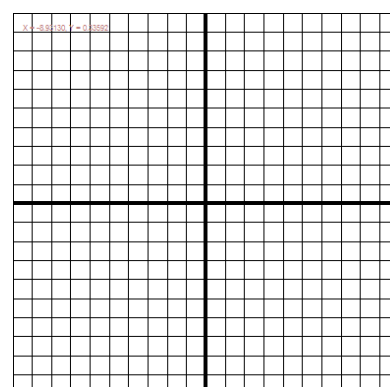
10. Use the graph of  $g$  to sketch the graph of



a.  $y = g(x - 1) - 2$



b.  $y = 2g(x - 3)$



11. Let  $f$  be a function such that  $f(-3) = -1$ ,  $f(1) = -3$ ,  $f(4) = 2$ . Give the coordinates of three points on the graph of:

a.  $y = f(x-2)$

b.  $y = f(x) - 2$

12. Let  $g$  be a function such that  $g(-1) = 3$ , and  $f(2) = -4$ . Give the coordinates of the two points on the graph of:

a.  $y = -g(x)$

b.  $y = g(-x)$

**Write the equation of a line in slope-intercept form, that satisfies the given conditions.**

13. Find the equation of the line whose graph is parallel to the graph of  $2x - 5y = 2$  and passes through the point  $P(-1, -5)$ .

14. Find the equation of the line whose graph is perpendicular to the graph of  $y = -\frac{3}{2}x - 2$  and passes through the point  $P(3, -1)$ .

**Write the quadratic function in vertex form.**

15.  $g(x) = x^2 + 6x + 10$

16.  $f(x) = 4x^2 - 6x + 1$

17.  $h(x) = -x^2 - 8x + 3$

**Find the maximum or minimum value of the function. State whether the value is a minimum or maximum.**

18.  $f(x) = -x^2 + 6x - 3$

19.  $h(x) = 2x^2 + 3x - 4$

20.  $g(x) = -6x^2 + 60x + 11$