

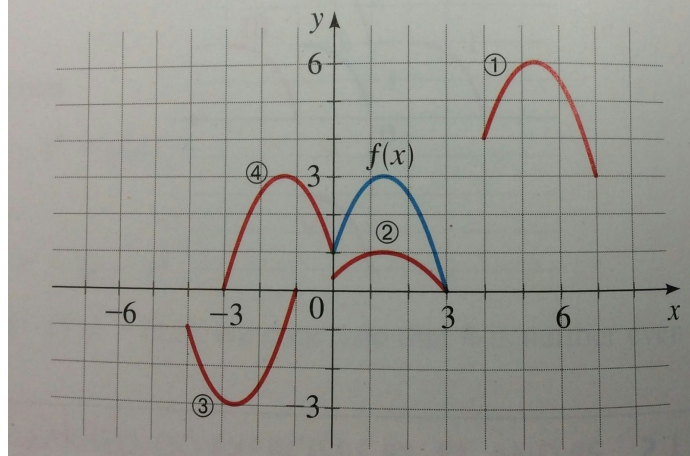
1. Match the equations to the graphs.

(a) $y = \frac{1}{3}f(x)$

(b) $y = -f(x + 4)$

(c) $y = f(x - 4) + 3$

(d) $y = f(-x)$



2.

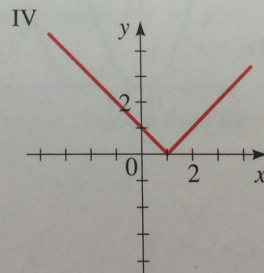
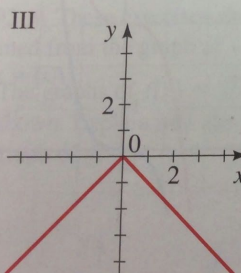
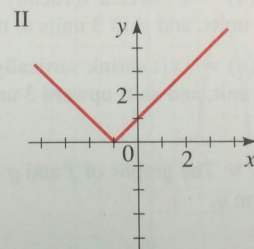
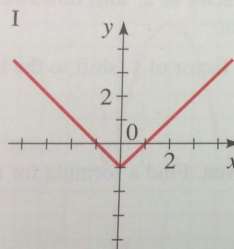
23–26 ■ Match the graph with the function. (See the graph of $y = |x|$ on page 191.)

23. $y = |x + 1|$

24. $y = |x - 1|$

25. $y = |x| - 1$

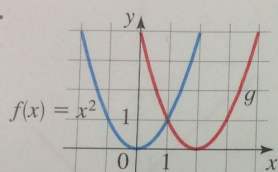
26. $y = -|x|$



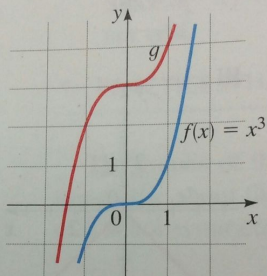
3-6

61–66 ■ The graphs of f and g are given. Find a formula for the function g .

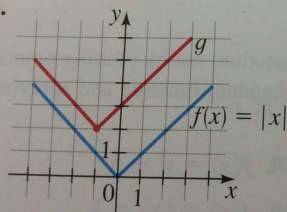
61.



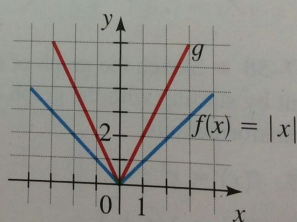
62.



63.



64.



61.
62.
63.
64.

7.

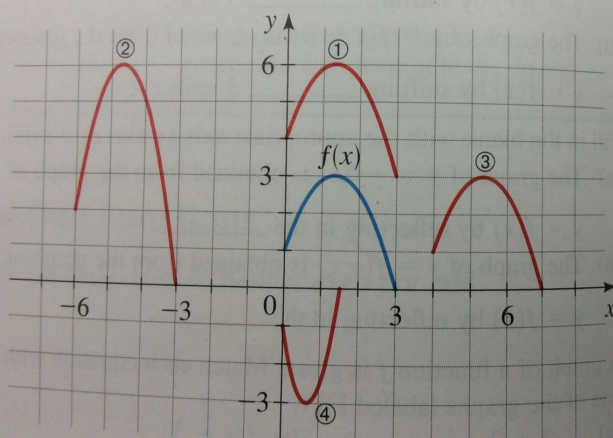
67–68 ■ The graph of $y = f(x)$ is given. Match each equation with its graph.

67. (a) $y = f(x - 4)$

(b) $y = f(x) + 3$

(c) $y = 2f(x + 6)$

(d) $y = -f(2x)$

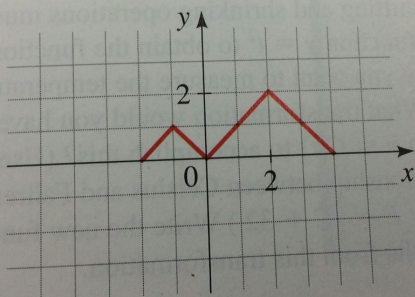


68. (a)

8.

The graph of g is given. Sketch the graphs of the following functions.

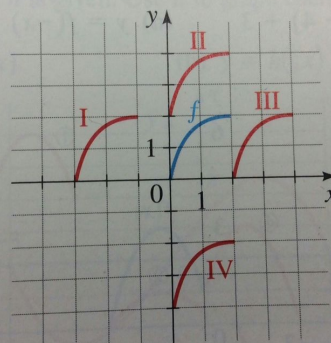
- (a) $y = g(x + 1)$ (b) $y = g(-x)$
 (c) $y = g(x - 2)$ (d) $y = g(x) - 2$
 (e) $y = -g(x)$ (f) $y = 2g(x)$



9.

A graph of a function f is given. Match each equation with one of the graphs labeled I–IV.

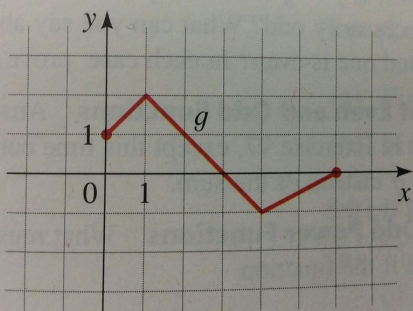
- (a) $f(x) + 2$ (b) $f(x + 3)$
 (c) $f(x - 2)$ (d) $f(x) - 4$



10.

The graph of g is given. Use it to graph each of the following functions.

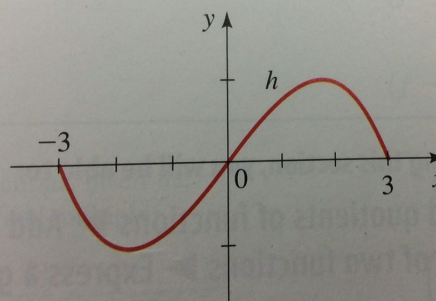
- (a) $y = g(2x)$ (b) $y = g(\frac{1}{2}x)$



11.

The graph of h is given. Use it to graph each of the following functions.

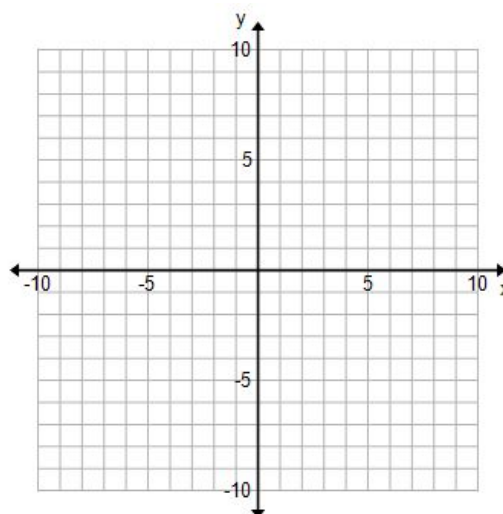
- (a) $y = h(3x)$ (b) $y = h(\frac{1}{3}x)$



12. Find the Domain of $f(x) = \sqrt{5x^2 - 20x}$

Use a table to sketch the graph to verify your answer.

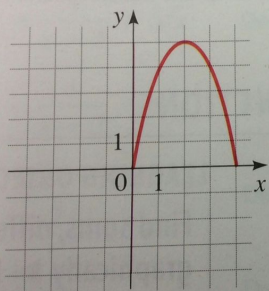
13.



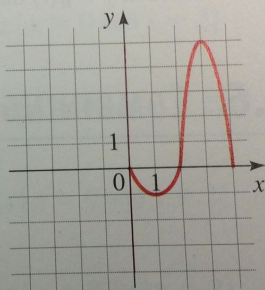
14-15.

89-90 ■ The graph of a function defined for $x \geq 0$ is given. Complete the graph for $x < 0$ to make (a) an even function and (b) an odd function.

89.



90.



16. Label the following as an even, odd, or neither.

a. $f(x) = x^4 - 4x^2$

b. $f(x) = x^3 - x$

c. $f(x) = x + \frac{1}{x}$

d. $f(x) = 3x^3 - 5x^2 + 1$

17. Find the average rate of change:

$f(x) = 5 - 2x^2$ between $x = 1$ and $x = 1+h$

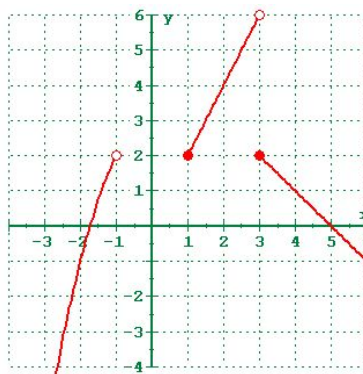
18. Find the average rate of change:

$f(x) = \frac{4}{x}$ between $x = 2$ and $x = a$

19. Find the Domain:

$f(x) = \frac{3x}{4-x^2}$

20.



Is the above graph a function? Yes/No

Is the above graph one-to-one? Yes/No

What is $f(-2)$?

What is the Domain?

What is the Range?

Interval(s) of Increasing?

Interval(s) of Decreasing?

21. Evaluate for $g(a^2 - 1)$;

$g(t) = \frac{t+2}{t-2}$

22. Find the equation of the piecewise graph above.