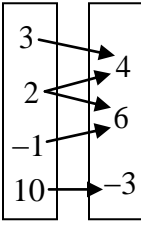
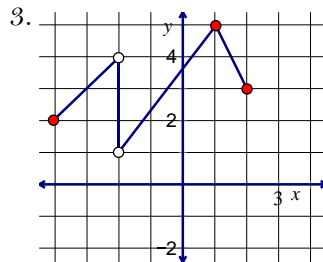


Is it a function? Explain.

1. 

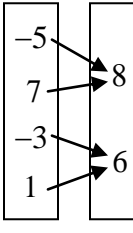
$x$	$y$
-2	2
-1	2
0	8
5	2
1	6

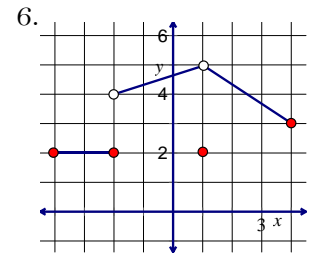
 2. 



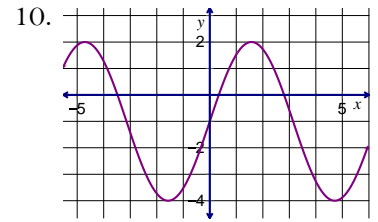
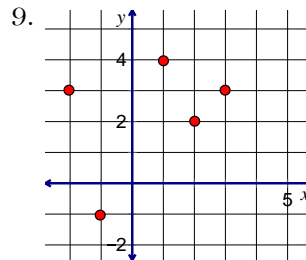
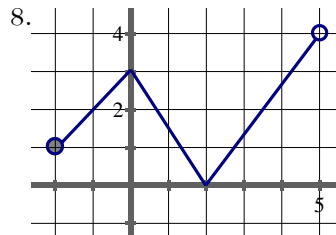
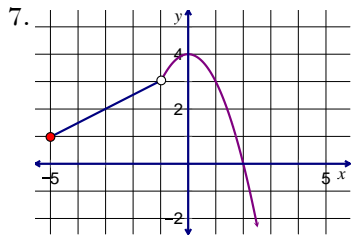
4. 

$x$	$y$
-3	2
-1	2
-3	8
2	2
-3	6

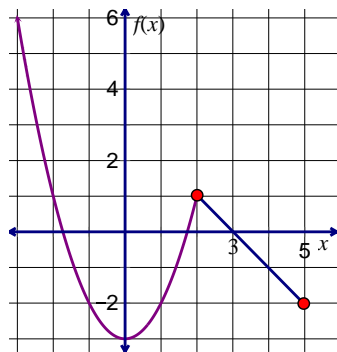
 5. 



Find the domain and range using interval notation or set notation.



Evaluate the expression or solve the equation.



$$g(x) = (x-1)^2 - 2$$

$x$	$h(x)$
-5	8
-1	2
0	8
2	2
-3	5

11.  $\frac{f(5)}{g(2) - h(-1)}$

12.  $g(f(1))$

13.  $f(h(-3))$

14.  $x$  when  $g(x) = 2$

15.  $x$  when  $h(x) = 8$

16.  $x$  when  $f(x) = -2$

Use  $z(x) = 3x^2 - 12$  and  $r(x) = \frac{2}{3}x + 4$ .

17.  $r(z(x))$

18.  $r(x-6)$

19.  $r(9x)$

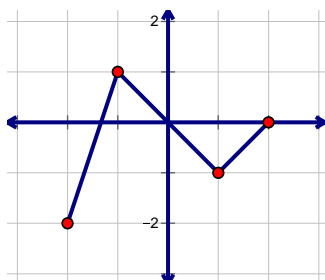
20.  $z(r(-9))$

Write the equation of the function described.

21. A radical function reflected over the  $y$ -axis, vertically dilated BAFO 2, translated left 3, up 4.

22. A quadratic function reflected over the  $x$ -axis, horizontally dilated BAFO 3, translated right 4, down 1.

Given the graph of  $y = f(x)$ , graph each transformed function.



23.  $y = -f(x+1)$

24.  $y = f(-(x-2)) - 4$

25.  $y = -f\left(\frac{x}{3}\right)$

26.  $y = 2f(x) - 3$

Sketch a complete graph.

27.  $f(x) = 2|x+3|$

28.  $g(x) = \sqrt{-(x-1)} + 3$

29.  $h(x) = -2x^2 - 1$

30.  $(x+1)^2 + (y-3)^2 = 25$

Name the vertex/anchor point of each function.

31.  $a(x) = -8 + \sqrt{x-1}$

32.  $b(x) = -4 - |x-2|$

33.  $c(x) = 2 + (x+3)^2$

Name the parent, then list the transformations.

34.  $m(x) = -\frac{1}{3}|x| + 5$

35.  $n(x) = -1 + \sqrt{-\left(\frac{3x}{5}\right)}$

36.  $\left(\frac{x+1}{3}\right)^2 + \left(\frac{y-3}{4}\right)^2 = 1$

Write the equation for each graph.

