

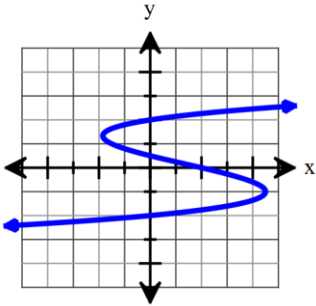
# 9.1

## SM3 Inverses & One-to-one Functions

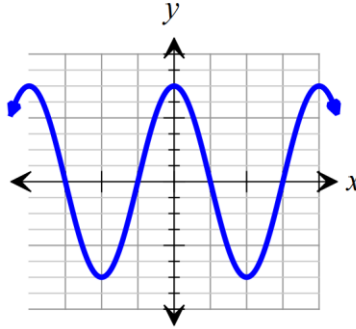
Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

In each exercise determine a) whether the relation is a function and b) whether the relations inverse is a function.

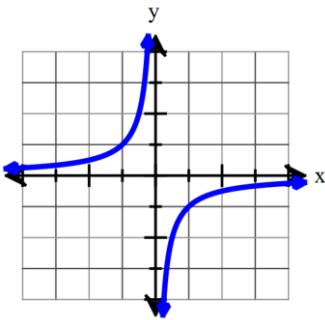
1.



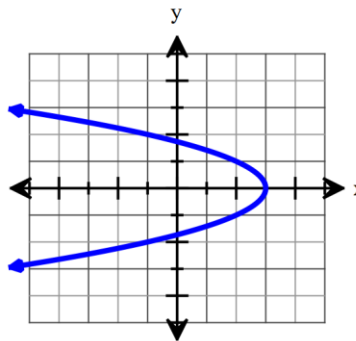
2.



3.



4.



Find an equation for  $f^{-1}(x)$ .

5.  $f(x) = 3x - 6$

6.  $f(x) = 2x + 5$

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

8.  $f(x) = \sqrt[3]{x-2}$

9.  $f(x) = 2x^2 - 6$

10.  $f(x) = \sqrt{x+5}$

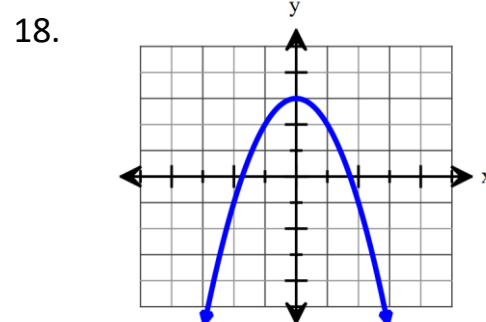
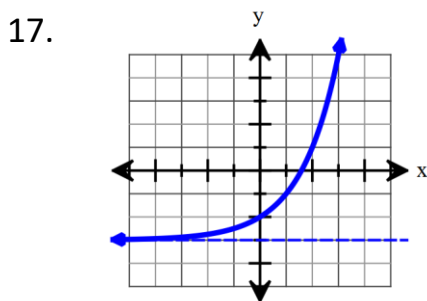
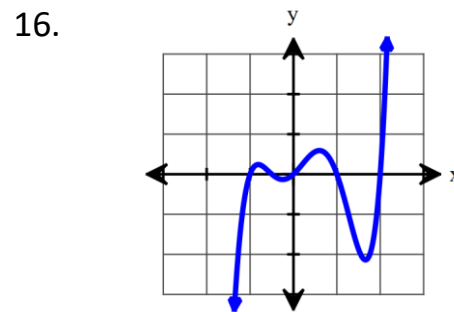
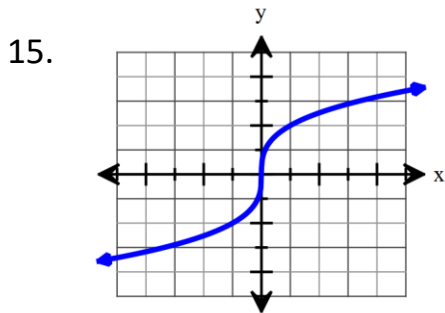
11.  $f(x) = x^3 + 4$

12.  $f(x) = \sqrt[3]{x+3} - 2$

13.  $f(x) = (x-1)^3 + 6$

14.  $f(x) = \frac{1}{2}\sqrt{x-1} - 3$

Determine whether the function is one-to-one and explain why or why not.



Use the table to write the table for the inverse function.

19.

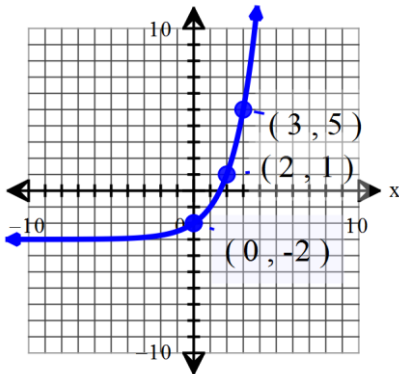
$x$	$f(x)$
0	4
2	2
4	-4
6	-14
8	-28

20.

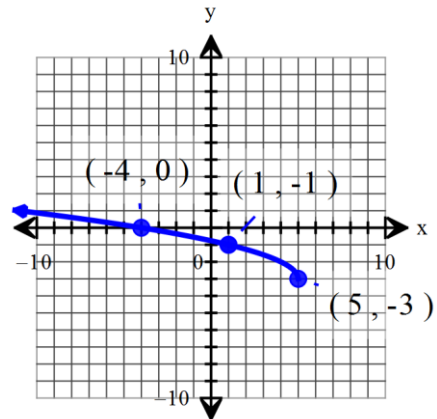
$x$	$f(x)$
-17	1.7
-12	1.6
-9	1.5
-7	1.4
-3	1

Use the graph to draw the graph to the inverse function.

21.



22.



### Review Exercises

Multiply the polynomials. Show work!

23.  $(x-7)(x+7)$

24.  $(x-7)^2$

25.  $(x+7)^2$

Solve the quadratic equation by using the quadratic formula. Show work!

26.  $2x^2 - 5x + 7 = 0$