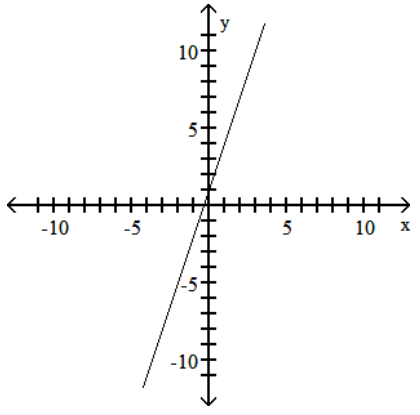
Math 1100: Section 4.1

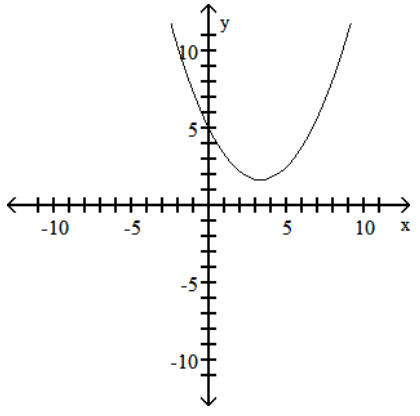
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Use the horizontal line test to determine whether the function is one-to-one.

1)



2)



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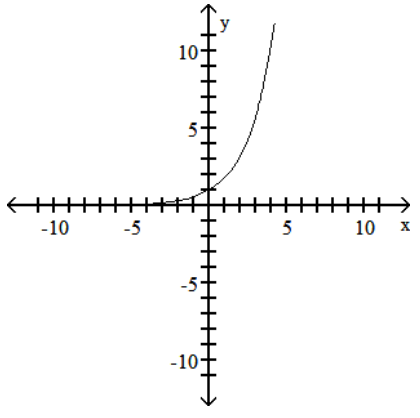
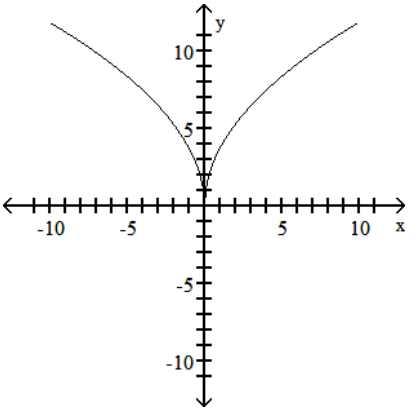


4)



Determine whether the function is one-to-one.

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

6) $r(x) = \sqrt{25 - x^2}$

7) $t(x) = \dfrac{3}{x - 1}$

8) $f(x) = |36 - x|$

Decide whether or not the functions are inverses of each other.

9) $f(x) = -\dfrac{1}{5}x,\ g(x) = -5x$

10) $f(x) = \sqrt{8 - x}\ ,\ g(x) = 8 - x^2$

11) $f(x) = \dfrac{3}{x + 2}\ ,\ g(x) = \dfrac{-2x + 3}{x}$

Find the inverse of the function.

12) $f(x) = 6x + 3$

13) $f(x) = x^2 - 9,\ x \geq 0$

14) $f(x) = \sqrt{x} - 7$

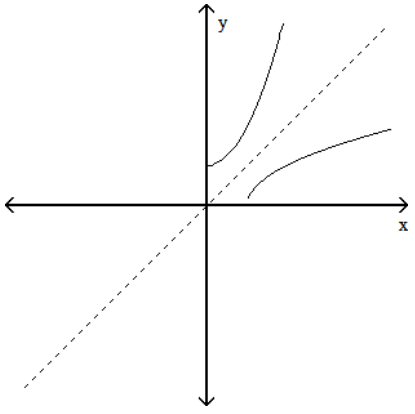
15) $f(x) = \dfrac{x + 9}{x + 6}$

Solve.

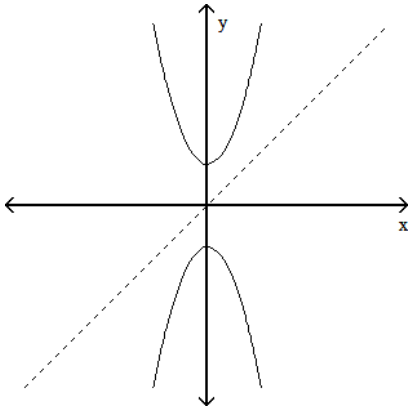
16) Find $f^{-1}(4)$ and $(f^{-1} \circ f)(-1)$ for the function f = {(8, 6), (-1, 9), (5, 4)}.

Decide whether the two functions represented by the solid curves are inverses of each other.

17)



18)



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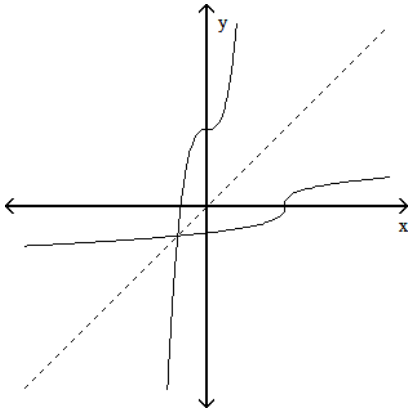

The graph of a function f is given. On the same axes, sketch the graph of f^{-1}.

20)