Name _____

8-2B   Lesson Master

VOCABULARY

1. What is the *inverse of a relation*?

_____

_____

SKILLS Objective B

2. The function $M = \dfrac{F}{5280}$ converts lengths from feet to miles.
   Write the inverse function and explain what the inverse does.

   _____

3. The function $P = 0.0625O$ converts weights from ounces to pounds.
   Write the inverse function and explain what the inverse does.

   _____

In 4–9, a function is defined. a. Write the inverse of the function. b. Tell if the inverse is a function.

4. $f(x) = \{(2, 8), (6, -1), (-4, 4), (0, -1)\}$

   a. _____

   b. _____

5. $y = 5x$

   a. _____

   b. _____

6. $y = 9x - 2$

   a. _____

   b. _____

7. $y = x^2 + 5x + 4$

   a. _____

   b. _____

8. $y = |x| + 1$

   a. _____

   b. _____

9. $y = -x^3$

   a. _____

   b. _____

PROPERTIES   Objective F

10. **Fill in the Blank** According to the horizontal-line test for inverses, if no horizontal line intersects the graph of a function f in more than one point, then

    _____.

Name _____

11. How are the domain and range of a function g related to the domain and range of the inverse of g?
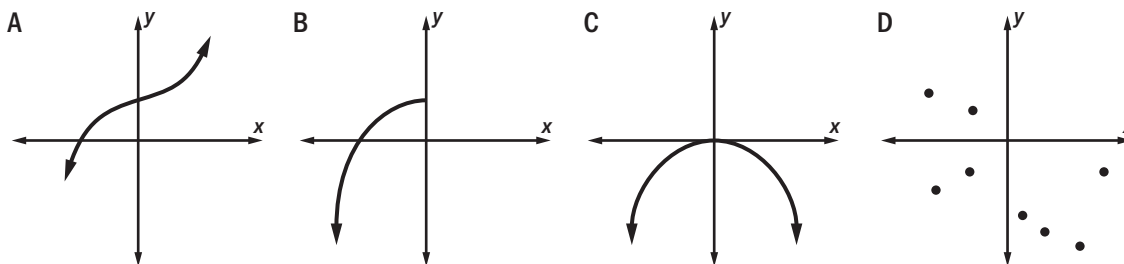
_____

_____

12. How is the graph of a function related to the graph of its inverse?

_____

_____

REPRESENTATIONS Objective J

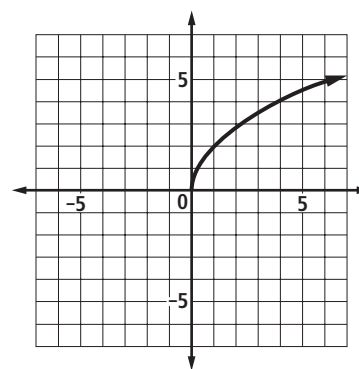13. **Multiple Choice** Identify all of the graphs below which represent a function whose inverse is also a function.

_____

A   B   C   D

14. **a.** Sketch the graph of the inverse of the function that is shown at the right.

b. Is the inverse also a function? Why or why not?

_____

_____

_____

15. **a.** At the right, graph the inverse of the function with equation $y = -2x^2$.

b. Is the inverse also a function? Why or why not?

_____

_____

_____

_____