Name _____

8-2A Lesson Master

SKILLS Objective B

In 1 and 2, give the inverse of the relation.

1. $\{(1, 2), (3, 4), (5, 6)\}$ _____

2. $\{(14, 2), (7, 7), (2, 14)\}$ _____

In 3 and 4, give an equation for the inverse of a function.

3. $y = 4.7x^2 - \frac{12}{x}$ _____   4. $Ax + By = C$ _____

5. The function $I = 2.54C$ converts lengths from centimeters to inches.
    Explain what the inverse does.

    _____

PROPERTIES Objective F

6. Suppose f is a function with domain $\{x \mid x \geq -2\}$ and range $\{y \mid 0 \leq y \leq 5\}$.
    Also suppose g is the inverse of f. Find the domain and range of g.

    a. Domain: _____   b. Range: _____

7. Explain why the inverse of the quadratic function $y = ax^2 + bx + c$ is not
    a function.

    _____

REPRESENTATIONS Objective J

8. If the point (a, v) is on the graph of a function, what point must be on
    the graph of the inverse?   _____

**In 9 and 10, graph the function and its inverse on the same axes below each
question using two different colors. Determine whether the inverse is a function.**

9. $\{(3, 1), (5, -2), (2, 7), (8, 1)\}$ 10. $y = x^3 - 3$

_____   _____