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. \(y = x^3 - 3\)