**SKILLS** Objective B

In 1-4, a function is described.  a. Give a set of ordered pairs or an equation for the inverse of the function;  b. State whether the inverse is a function.

1. \( y = 2 - 3x \)
   a. __________________________
   b. __________________________

2. \( f(x) = \frac{1}{\sqrt{x}} \)
   a. __________________________
   b. __________________________

3. \( g = \{(3, 2), (2, -1), (5, 3), (3, -1)\} \)
   a. __________________________
   b. __________________________

4. \( h(x) = \frac{3}{x + 4} \)
   a. __________________________
   b. __________________________

**PROPERTIES** Objective F

In 5 and 6, true or false.  If true, explain your answer.  If false, give a counterexample.

5. If a function is an even function, then its inverse is not a function.
   
   ____________________________________________________________

6. Given two functions, \( f \) and \( g \), if \( f(g(x)) = x \) for all \( x \) in the domain of \( g \) then \( f \) and \( g \) are inverses.
   
   ____________________________________________________________

**REPRESENTATIONS** Objective H

In 7-8, determine whether the inverse of the graphed function is a function.  If the inverse is a function, sketch its graph on the same set of axes.

[Graphs of functions and their inverses are shown here.]

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Functions, Statistics, and Trigonometry