

## 5.2 One-to-One Functions; Inverse Functions

In-class work:

**Exercise 44** Determine whether the two given functions are inverses of each other. Give the domain and range of each function.

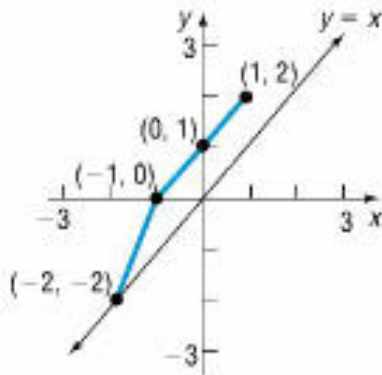
$$f(x) = \frac{x-5}{2x+3} \quad g(x) = \frac{3x+5}{1-2x}$$

### Exercises 45 and 48

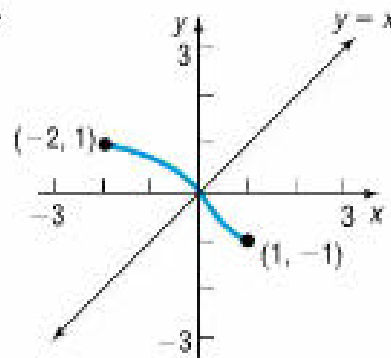
The graph of a function is given. Answer all the questions for each function:

- Is the function one-to-one? Explain.
- Give the domain and range of the function.
- Does the function have an inverse? Explain.
- Draw the graph of the inverse function.
- Give domain and range of the inverse function.

45.



48.



### Exercises 58, 62, and 66

A one-to-one function is given. Do the following:

- Find the inverse function
- Find the domain and range of the function and its inverse
- Graph both functions on the same coordinate system.

58)  $f(x) = x^2 + 9, x \geq 0$

62)  $g(x) = \frac{4}{x+2}$

66)  $h(x) = -\frac{2x}{x-1}$

