

# Practice 5-3

## Function Rules, Tables, and Graphs

Model each rule with a table of values and a graph.

- |                              |                          |                               |
|------------------------------|--------------------------|-------------------------------|
| 1. $f(x) = x + 1$            | 2. $f(x) = 2x$           | 3. $f(x) = 3x - 2$            |
| 4. $f(x) = \frac{3}{2}x - 2$ | 5. $f(x) = \frac{1}{2}x$ | 6. $f(x) = -\frac{2}{3}x + 1$ |
| 7. $f(x) = x^2 + 1$          | 8. $f(x) = -x^2 + 2$     | 9. $f(x) = x - 3$             |

10. Suppose a van gets 22 mi/gal. The distance traveled  $D(g)$  is a function of the gallons of gas used.

- Use the rule  $D(g) = 22g$  to make a table of values and then a graph.
- How far did the van travel if it used 10.5 gallons of gas?
- Should the points of the graph be connected by a line? Explain.

11. The admission to a fairgrounds is \$3.00 per vehicle plus \$.50 per passenger. The total admission is a function of the number of passengers.

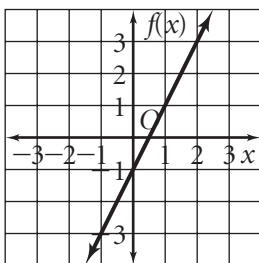
- Use the rule  $T(n) = 3 + 0.50n$  to make a table of values and then a graph.
- What is the admission for a car with six people in it?
- Should the points of the graph be connected by a line? Explain.

Graph each function.

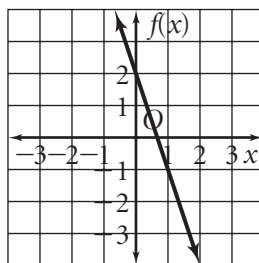
- |                                |                               |                                |
|--------------------------------|-------------------------------|--------------------------------|
| 12. $f(x) = 4x + 2$            | 13. $f(x) =  -2x $            | 14. $f(x) = -3x + 7$           |
| 15. $f(x) = - x  - 1$          | 16. $f(x) = 8 - \frac{3}{4}x$ | 17. $f(x) = \frac{2}{3}x - 7$  |
| 18. $f(x) = -\frac{2}{3}x + 6$ | 19. $f(x) = x^2 - 2x + 1$     | 20. $f(x) = -\frac{1}{2}x + 3$ |
| 21. $y = -x^2 + 1$             | 22. $y = 9 - x^2$             | 23. $y = 2x^2 + x - 2$         |

Make a table of values for each graph.

24.



25.



26.

