Practice C

For use with the lesson "Write Linear Equations in Slope-Intercept Form"

Write an equation of the line with the given slope and *y*-intercept.

1. slope: -8

y-intercept: 0

2. slope: $\dfrac{1}{4}$

y-intercept: -3

3. slope: $-\dfrac{3}{5}$

y-intercept: $\dfrac{1}{2}$

Write an equation of the line that passes through the given points.

4. $(-3, 10), (5, -22)$

5. $(-6, -3), (6, 5)$

6. $(-2, 8), (7, -5.5)$

7. $(-5, -13.5), (2.5, 5.25)$

8. $(-7, -8), (21, 8)$

9. $(-9, -20), (9, 4)$

Write an equation for the linear function *f* with the given values.
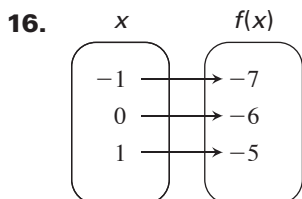
10. $f(6) = 2, f(15) = -4$

11. $f(-2) = 21, f(5) = -35$

12. $f(-6) = -2, f(3) = -5$

13. $f(-3) = 10.5, f(6) = -12$

14. $f(3) = -0.2, f(0.2) = -1.88$

15. $f(-9) = -14, f(12) = 14$

Write an equation that represents the linear function shown in the table or mapping diagram.

16.

x	*f(x)*
-1	-7
0	-6
1	-5

17.

x	*f(x)*
-8	-2
-4	-1
0	0

18. Swimming For exercise, you swim several times a week. Currently, you swim 5 laps each time you swim. You want to gradually increase the number of laps each time you swim. Your plan is to swim 2 additional laps each time you swim. Write an equation that gives the total number of laps you swim as a function of the number of times you have been swimming since you started adding laps. Find the total number of laps you will swim in 8 weeks if you swim 3 times a week.

19. Sales Flyers A printing shop charges $50 to set up its equipment to print flyers. If the order is less than 1000 flyers, the shop charges $.45 to print each flyer. If the order is 1000 flyers or more, the shop charges $.30 to print each flyer.

a. Write an equation that gives the total cost (in dollars) for printing less than 1000 flyers as a function of the number of flyers printed.

b. Write an equation that gives the total cost (in dollars) for printing 1000 flyers or more as a function of the number of flyers printed.

c. What is the domain of the function from part (a)? What is the domain of the function from part (b)? *Explain*.

d. Use each of the equations to determine how many flyers you can have printed for $400. If you had your choice, how many flyers would you order? *Explain* your reasoning.