

50. **TAKS REASONING** You borrow \$180 from a friend who doesn't charge you interest. You work out a payment schedule in which you will make weekly payments to your friend. The balance  $B$  (in dollars) of the loan is given by the function  $B = 180 - pn$  where  $p$  is the weekly payment and  $n$  is the number of weeks you make payments.
- Interpret** Without finding the intercepts, state what they represent.
  - Graph** Graph the function if you make weekly payments of \$20.
  - Identify** Find the domain and range of the function in part (b). How long will it take to pay back your friend?
  - CHALLENGE** Suppose you make payments of \$20 for three weeks. Then you make payments of \$15 until you have paid your friend back. How does this affect the graph? How many payments do you make?



## MIXED REVIEW FOR TAKS

**TAKS PRACTICE** at classzone.com

### REVIEW

Lesson 3.2;  
TAKS Workbook

51. **TAKS PRACTICE** A hotel room costs \$85 per night for 2 people, plus \$10 per night for every additional person who stays in the room. If a family of 4 stays at the hotel for 3 nights, how much does the stay cost? **TAKS Obj. 4**
- (A) \$275      (B) \$315      (C) \$345      (D) \$375

### REVIEW

TAKS Preparation  
p. 622;  
TAKS Workbook

52. **TAKS PRACTICE** A solid sphere with a diameter of  $x$  units is packed within a cube-shaped crate. The inside of the crate has an edge length of  $x$  units. How much unused space does the crate have? **TAKS Obj. 8**
- (F)  $x^3 - \frac{4\pi x^3}{3}$       (G)  $x^3 - \frac{\pi x^3}{6}$       (H)  $x^3 - \frac{\pi x^3}{8}$       (J)  $x^3 - \pi x^2$

## QUIZ for Lessons 4.1–4.3

Plot the point in a coordinate plane. Describe the location of the point. (p. 206)

1.  $(-7, 2)$

2.  $(0, -5)$

3.  $(2, -6)$

Graph the equation. (p. 215)

4.  $-4x - 2y = 12$

5.  $y = -5$

6.  $x = 6$

Find the  $x$ -intercept and the  $y$ -intercept of the graph of the equation. (p. 225)

7.  $y = x + 7$

8.  $y = x - 3$

9.  $y = -5x + 2$

10.  $x + 3y = 15$

11.  $3x - 6y = 36$

12.  $-2x - 5y = 22$

13. **SWIMMING POOLS** A public swimming pool that holds 45,000 gallons of water is going to be drained for maintenance at a rate of 100 gallons per minute. The amount of water  $w$  (in gallons) in the pool after  $t$  minutes is given by the function  $w = 45,000 - 100t$ . Graph the function. Identify its domain and range. How much water is in the pool after 60 minutes? How many minutes will it take to empty the pool? (p. 225)

