Practice 3

FOR USE WITH SECTION 7.3

Solve each system of equations by adding or subtracting.

1. $x - y = 7$
$x + y = 15$

2. $a - b = 10$
$a - 3b = 12$

3. $4m + 3n = -3$
$5m + 3n = -9$

4. $4 = 2p - 5q$
$20 = 2p + 3q$

5. $7r - 5s = 8$
$3r - 5s = 12$

6. $-2c + 5d = 30$
$2c - 10d = -50$

7. $3x = -5y + 28$
$3x = 2y - 28$

8. $6 - 4u = 5v$
$6 + 4u = v$

9. $1 = 7a + 3b$
$46 = 7a - 2b$

10. $-2g = 7h - 19$
$2g = 3h + 9$

11. $6x - 5y - 33 = 0$
$11x - 5y - 48 = 0$

12. $3x - \frac{1}{2}y = 13$
$4x - \frac{1}{2}y = 18$

Solve each system of equations by graphing, substituting, adding, or subtracting.

13. $x - 2y = 0$
$5x + 3y = 13$

14. $3x + 7y = 15$
$8x + 7y = 5$

15. $x + \frac{1}{3}y = 3$
$2x - y = 16$

16. $8a - b = 7$
$-8a + 3b = 11$

17. $3x + 2y = 7$
$4x - 3y = -36$

18. $4c - 5d = 14$
$6c - 5d = -4$

19. Alta, Gaho, and Young Mee were buying food at Health King for their groups on Community Service Day. Alta bought 2 yogurt shakes and 3 rice cakes for $5.40. Gaho bought 2 yogurt shakes and 6 rice cakes for $7.80. Young Mee wanted to buy 2 yogurt shakes and 4 rice cakes. How much should that cost?

20. To determine her car's fuel efficiency, Nioke drove 75 mi in the city and 160 mi on the highway and used 8 gal of gasoline. Then she drove 75 mi in the city and 120 mi on the highway and used 6.75 gal.

a. Let x = the number of gallons used per mile of city driving. Let y = the number of gallons used per mile of highway driving. Write two equations stating the results of Nioke's fuel efficiency tests.

b. Find the fuel efficiency of Nioke's car in city driving (in mi/gal). Hint: The reciprocal of a number of gal/mi is a number of mi/gal.