SECTION 2-2

EXERCISE A

Solve each system of equations using the substitution method.

1) $y = 3x - 4$
$y = 4 + x$

2) $4x + 2y = 10$
$x + 3y = 10$

3) $x - y = 2$
$-2x + 3y = 3$

4) $3x - 2y = -1$
$4x + y = 17$

Solve each system of equations using the elimination method.

5) $2x - 3y = 11$
$2x + 2y = 6$

6) $5x + y = 10$
$4x + y = 4$

7) $2x + 4y = 18$
$3x - 6y = 3$

8) $1.25x - y = -7$
$4y = 5x + 28$

Solve each system using whichever method seems best.

9) $2x + 8y = 52$
$x - 5y = -10$

10) $4y - 3x = 4$
$y = \frac{1}{2}x - 3$

11) $-3x + 5y = 12$
$6x - 10y = -21$

EXERCISE B

Solve each system of equations using the substitution method.

12) $2x - 3y = 3$
$x = 14 - y$

13) $2x + y = 11$
$6x - 2y = -2$

14) $3x + 2y = -3$
$x + \frac{1}{3}y = -4$

15) $2x + 4y = 6$
$7x = 4 + 3y$

Solve each system of equations using the elimination method.

16) $x + y = 7$
$2x + y = 11$

17) $4x - 5y = 17$
$3x + 4y = 5$

18) $2x + 6y = 14$
$-\frac{7}{3} + \frac{1}{3}x = -y$

19) $6x + 3y = 12$
$2x = 8 - y$

Solve each system using whichever method seems best.

20) $10x - 9y = 15$
$5x - 4y = 10$

21) $2x = 7 + y$
$6x - 3y = 24$

22) $3x = -3 + 2y$
$3x + y = 3$

EXERCISE C

23) All 28 members of the IV Ski Club went on a one-day ski trip. Some members rented skis for $16 per day, while others rented snowboards for $19 per day. The club paid a total of $478 for rental equipment.

a) Write a system of equations to represent the number of members who rented the two types of equipment.
b) Solve to determine how many members rented skis and how many rented snowboards.

24) Megan exercises every morning for 40 minutes. She does a combination of step aerobics, which burns 11 calories per minute, and stretching, which burns about 4 calories per minute. Her goal is to burn 335 calories.

a) Write a system of equations to represents Megan's workout.

b) How long should she do each activity to achieve her goal?

ANSWERS:

1) (4, 8)
3) (9, 7)
5) (4, -1)
7) (5, 2)
9) (10, 4)
11) no solution
13) (2, 7)
15) (1, 1)
17) (3, -1)
19) no solution
21) no solution
23a) x + y = 28 & 16x + 19y = 478
b) 18skis, 10snowboards