

### Solving Equations with Variables on Both Sides

To solve an equation with a variable on each side you must first collect all your variables to one side of the equation. Then solve for the variable using all the steps you've learned in previous lessons.

EXAMPLE:  $-3x = 2x - 20$

Solve the following equations.

1.  $5x = -7x + 6$

2.  $14x - 6 = 17x$

3.  $2x + 3 = 2x + 4$

4.  $-2(x + 5) = -2x - 10$

5.  $9x - 3 = 9x$

6.  $2(x - 7) = 2x - 14$

7.  $x + 3 = -5x$

8.  $-x + 7 = -8x$

9. A health club charges nonmembers \$2 per day to swim and \$5 per day for aerobic classes. Members pay a yearly fee of \$200 plus \$3 per day for aerobic classes. Write and solve an equation to find the number of days you must use the club to justify a yearly membership.