

**Ch. 2 Practice**  
**Math 90**

Name \_\_\_\_\_  
Day or Section \_\_\_\_\_

Do and show all work on another piece of paper:

Simplify each of the following expression.

- $3x + 2 - 7x + 3$
- $4a - 5 - a + 1$
- $7 - 3(y + 5) - 4$
- $8(2x + 1) - 5(x - 4)$
- Find the value of  $2x - 3 - 7x$  when  $x = -5$ .
- Find the value of  $x^2 + 2xy + y^2$  when  $x = 2$  and  $y = 3$ .

Solve the following equations.

- $2x - 5 = 7$
- $2y + 4 = 5y$
- $\frac{1}{2}x - \frac{1}{10} = \frac{1}{5}x + \frac{1}{2}$
- $\frac{2}{5}(5x - 10) = -5$
- $-5(2x + 1) - 6 = 19$
- $0.04x + 4(5x + 1) = 3x + 17$
- $2(t - 4) + 3(t + 5) = 2t - 2$
- $2x - 4(5x + 1) = 3x + 17$
- What number is 15% of 38?
- 240 is 12% of what number?
- If  $2x - 3y = 12$ , find  $x$  when  $y = -2$ .
- The formula for the volume of a cone is  $V = \frac{1}{3}\pi r^2 h$ . Find  $h$  if  $V = 88$  cubic inches,  $\pi = \frac{22}{7}$ , and  $r = 3$  inches.
- Solve  $2x + 5y = 20$  for  $y$ .
- Solve  $h = x + vt + 16t^2$  for  $v$ .

Solve each word problem.

- Credit Card** Dave's MasterCard grew to \$870 in one month. His rate is 2%. What was his original balance?
- Geometry** A rectangle is twice as long as it is wide. The perimeter is 60 inches. What are the length and width?
- Truck Rental** A truck rents for a daily rate of \$49.95 plus 39¢ per mile. How far can you take the truck for a one day rental on a \$100 budget?

Solve each inequality, and graph the solution.

- $2x + 3 < 5$
- $-5a > 20$
- $0.4 - 0.2x \geq 1$
- $4 - 5(m + 1) \leq 9$

**Answers**

- $-4x + 5$
- $3a - 4$
- $-3y - 12$
- $11x + 28$
- 22
- 25
- 6
- $4/3$
- $x = 2$
- $-1/2$
- 3
- 0.763
- 3
- 1
- 5.7
- 2000
- 3
- $28/3$
- $\frac{-2}{5}x + 4$
- $v = \frac{h - x - 16t^2}{t}$
- \$852.94
- $w = 10$  in,  $l = 20$  in
- 128  $\frac{1}{3}$  miles
- $x < 1$
- $a < -4$
- $x \leq -3$
- $m \geq -2$