

Name: \_\_\_\_\_

1-17. Solve for the given variable. Show the steps leading to your solution. Check your solution.

a.  $-11x = 77$

c.  $\frac{x}{8} = 2$

b.  $5c + 1 = 7c - 8$

d.  $-12 = 3k + 9$

1-18. Calculate the values of the expressions below. Show all steps in your process.

a.  $\frac{3(2+6)}{2}$

c.  $7^2 - 5^2$

b.  $\frac{1}{2} (14)(5)$

d.  $17 - 6 \cdot 2 + 4 \div 2$

1-25. Examine the rectangle at right. If the perimeter of this shape is 120 cm, which equation below represents this fact? Once you have selected the appropriate equation, solve for  $x$ .



$6x-1$

$2x+5$

a.  $2x + 5 + 6x - 1 = 120$

b.  $4(6x - 1) = 120$

c.  $2(6x - 1) + 2(2x + 5) = 120$

d.  $(2x + 5)(6x - 1) = 120$

**1-32.** Solve for  $x$  in each equation below, show all steps leading to your solution, and check your answer.

a.  $34x - 18 = 10x - 9$

c.  $3(x - 5) + 2(3x + 1) = 45$

b.  $4x - 5 = 4x + 10$

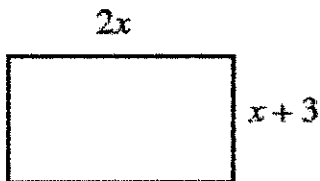
d.  $-2(x + 4) + 6 = -3$

**1-34.** For each of the equations below, solve for  $y$  in terms of  $x$ .

a.  $2x - 3y = 12$

b.  $5x + 2y = 7$

**1-35.** Examine the rectangle below.



- What is the perimeter in terms of  $x$ ? In other words, find the perimeter.
- If the perimeter is 78 cm, find the dimensions of the rectangle. Show all your work.
- With the information from part (b), verify the area of this rectangle is 360 sq. cm. Explain how you know this.

1-36. For each line segment below, find the slope. You may want to copy each line segment on graph paper in order to draw slope triangles.

