

Unit 4: Writing & Solving Linear Equations

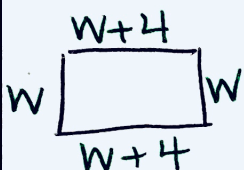
4-4 Geometric Applications... SHAPES!

- (1) Draw the geometric shape being described.
- (2) Label all sides.
- (3) Create a "Let Statement" Chart.
- (4) Use keywords to write equation.
- (5) Solve the equation & answer the question!

Dimensions means... lengths of sides
(Length, Width, Height)

Perimeter means... Add all sides of shape.

Example 1: The length of a rectangle is 4 more than the width. The perimeter is 96 inches. Find the dimensions of the rectangle.



length	$W+4$	26
width	W	22

$$W + W + W + 4 + W + 4 = 96$$

$$4W + 8 = 96$$

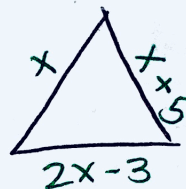
$$\frac{4W}{4} = \frac{88}{4}$$

$$W = 22$$

The length is 26 in and width is 22 in.

The sides are 10cm, 15cm and 17cm.

Example 2: The second side of a triangle is 3 less than twice the first side. The third side is 5 more than the first side. The perimeter is 42 centimeters. Find the lengths of each side of the triangle.



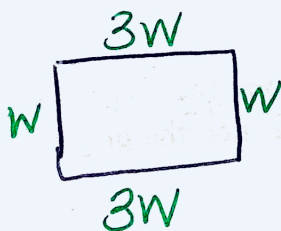
1st	x	10cm
2nd	$2x-3$	17cm
3rd	$x+5$	15cm

$$4x + 2 = 42$$

$$\frac{4x}{4} = \frac{40}{4}$$

$$x = 10$$

- (1) The length of a rectangular garden is three times its width. The perimeter of the garden is 72 feet. Find the dimensions of the garden.

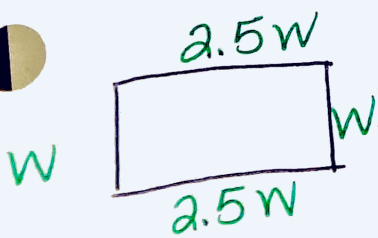


length	$3W$	27 ft
width	W	9 ft

$$\frac{8W}{8} = \frac{72}{8}$$

$$W = 9$$

- (2) The length of a rectangle is $2\frac{1}{2}$ times its width. The perimeter of the rectangle is 84 cm. What is the length of the rectangle?



length	$2.5W$	30 cm
width	W	12 cm

$$\frac{7W}{7} = \frac{84}{7}$$

$$W = 12$$