

Name _____

8A; Algebra 1

Date _____

Period _____

Perimeter Word Problems

I. Definitions-

A) Perimeter-

B) Regular polygon-

*** When solving perimeter word problems, make sure to draw a correctly labeled diagram**

II. Part I type problems-

1) Find the perimeter of a triangle whose sides are x , $2x + 1$ and $3x + 4$.

2) The perimeter of a square is $4x - 4$. Express the length of one side of the square in terms of x .

3) If one side of a regular pentagon is $2x + 5$, what is the perimeter?

4) The length of a side of a square is represented by $3x - 1$. If the perimeter of the square is 68 find the value of x .

III. Part II type problems. Use LESC to solve. (Remember your diagrams)

1) The perimeter of a rectangle is 40 feet. The length is 2 feet more than 5 times the width. Find the dimensions of the rectangle.

2) The length of a rectangle is twice the width. If the length is increased by 4 inches and the width is decreased by 1 inch, a new rectangle is formed whose perimeter is 198 inches. Find the dimensions of the original rectangle.

3) The length of a rectangle is 8 meters less than 5 times its width. If the perimeter of the rectangle is at most 104 meters, find the greatest possible width of the rectangle.

4) The length of the second side of a triangle is 2 inches less than the length of the first side. The length of the third side is 12 inches more than the length of the first side. The perimeter of the triangle is 73 inches. Find the length of each side of the triangle.

5) A side of a square is 10 meters longer than the side of an equilateral triangle. The perimeter of the square is 3 times the perimeter of the triangle. Find the length of each side of the triangle.

6) The perimeter of a rectangular tennis court is 228 feet. If the length of the court exceeds twice its width by 6 feet, find its dimensions.

7) The length of the second side of a triangle is 8 inches less than the length of the first side. The length of the third side is 14 inches more than the length of the first side. The perimeter of the triangle is 63 inches. Find the length of each side of the triangle.