

**Lesson Presentation**  
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**Objective(s):**

The student will explore and investigate the properties of triangles.

The student will classify triangles by their angles and their sides.

**Materials Needed:**

- A. Shoe string or pieces of rope
- B. Coffee stirrers, toothpicks, drinking straws
- C. Scissors, rulers

**Teacher's Focus:**

Allow students to review the shapes and definitions of polygons. Ask students to model the different shapes (with the shoe strings) representing each of the polygons.

Ask five students to construct a triangle (using their shoe strings) and then ask eight students to construct a triangle (using their shoe strings).

**Triangles Classified by Length of the Sides**

Equilateral Triangle

Definition:

*Teacher Note: Congruent sides are often marked with a slash through the sides. Vertex is the point where two sides meet.*

Isosceles Triangle

Definition:

Scalene Triangle  
Definition:

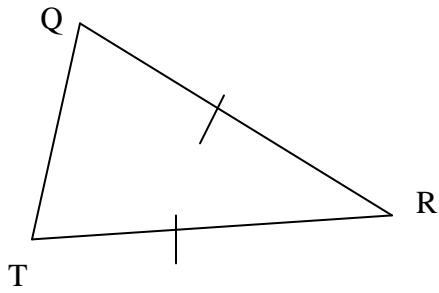
### **Triangles Classified by Measure of the Angles**

Obtuse Triangle  
Definition:

Acute Triangle  
Definition:

Right Triangle  
Definition:

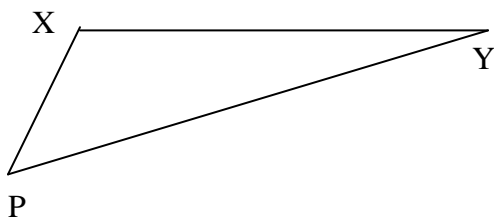
Examples



Name the triangle \_\_\_\_\_

Classify the triangle by its angles and sides

\_\_\_\_\_



Name the triangle \_\_\_\_\_

Classify the triangle by its angles and sides

\_\_\_\_\_

Using the toothpicks, construct and trace a right, scalene triangle below.

Using the toothpicks, construct and trace an acute, equilateral triangle below.



## Problem Solving and Critical Thinking

1. What type of triangle has one pair of perpendicular sides? Draw a figure to justify your answer.
2. An equiangular triangle has three congruent angles. What is the measure of each angle of an equiangular triangle?
3. You decide, Maria and Pedro were drawing triangles on paper and then describing them to each other, Maria told Pedro that she drew a triangle that had two obtuse angles. Pedro said that it could not be done. Who was correct? Explain
4. Use toothpicks to build the figure below. Remove the stated number of sticks to get the specific number of triangles. Draw your figure.

Remove	Number of Triangles
2	3
2	2
3	1
3	2

