
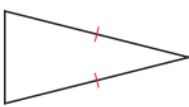

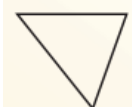
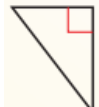

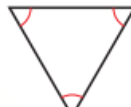


## Geometry 5.1 Notes: Classifying Triangles

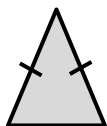
### Classifying Triangles by their SIDES

Scalene Triangle	Isosceles Triangle	Equilateral Triangle
		
No congruent sides	At least 2 congruent sides	3 congruent sides

### Classifying Triangles by their ANGLES

Acute Triangle	Right Triangle	Obtuse Triangle	Equiangular Triangle
			
3 acute angles	1 right angle	1 obtuse angle	3 congruent angles

1. Classify the triangular shape by its sides.

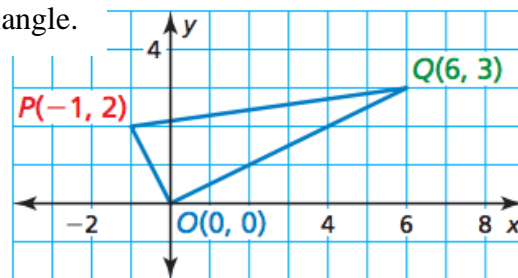


2. Classify the triangular shape by its angles.



### In the Coordinate Plane

3. Classify  $\triangle OPQ$  by its sides. Then determine whether it is a right triangle.

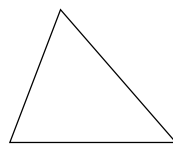
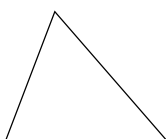


### Finding Angle Measures of Triangles

When the sides of a polygon are extended, other angles are formed.

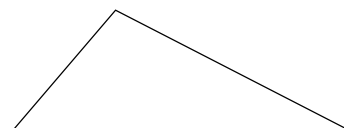
→ The ORIGINAL angles are the \_\_\_\_\_ angles

→ The angles that form \_\_\_\_\_ with the interior angles are the \_\_\_\_\_ angles.

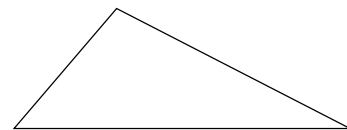


### **Triangle Sum Theorem**

The sum of the measures of the interior angles of a triangle is \_\_\_\_\_.

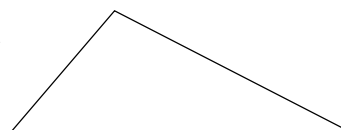


**Triangle Sum Theorem PROOF:** *\*hint: draw a line parallel to any side of the triangle through its opposite vertex*

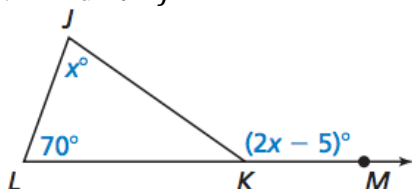


### Exterior Angle Theorem

The measure of an exterior angle of a triangle is equal to the \_\_\_\_\_ of the measures of the two \_\_\_\_\_ interior angles.

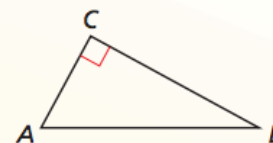


4. Find  $m\angle JKM$



### Corollary to the Triangle Sum Theorem

The acute angles of a right triangle are \_\_\_\_\_.



5. Find the measure of each acute angle.

