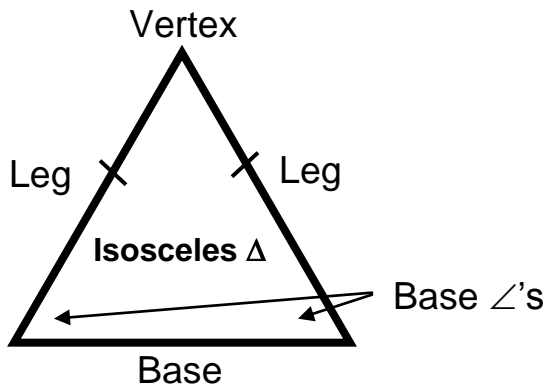


Unit #5 Fact Sheet

Triangle Basics

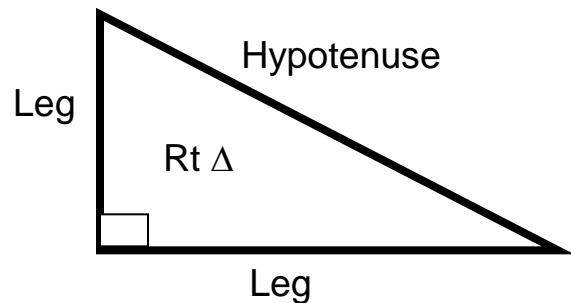
Triangles by Sides

- Equilateral
- Isosceles
- Scalene



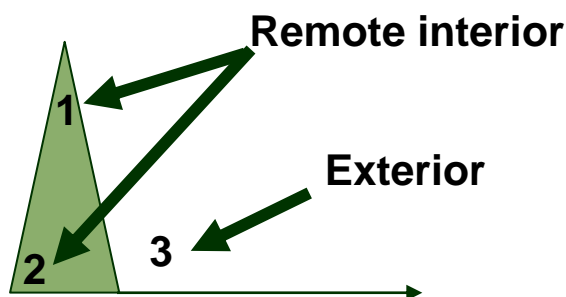
Triangles by Angles

- Acute
- Right
- Obtuse
- Equiangular

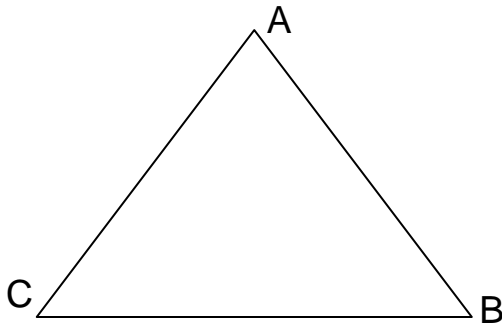


Triangle Theorems

- **Triangle Sum Theorem**: The sum of the measures of the angles of a triangle is 180° .
- **Exterior Angle Theorem**: The measure of an exterior angle of a triangle is equal to the sum of the measures of the two remote interior angles.



- **Isosceles Δ Theorem:** If two sides of a Δ are \cong , then the \angle 's opposite those sides are \cong .



If $\overline{AB} \cong \overline{BC}$, then $\angle A \cong \angle C$

- **Triangle Inequality Theorem:**

Any side of a triangle is always shorter than the sum of the other two sides.

Triangle Inequality Theorem

$$7 + 8 > 9$$

$$8 + 9 > 7$$

$$9 + 7 > 8$$

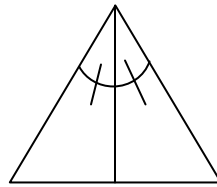
Geometry EETI Grant

Other Triangle Facts

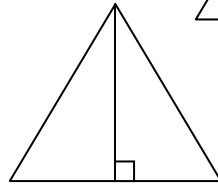
- The largest side is opposite the *largest angle*, and the smallest side is opposite the *smallest angle*.
-

SPECIAL SEGMENTS IN TRIANGLES

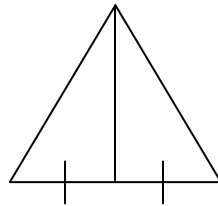
- **Angle Bisector:**



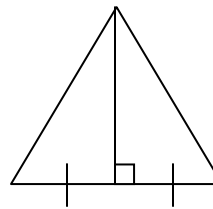
- **Altitude:**



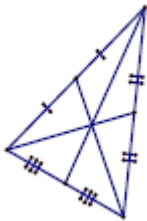
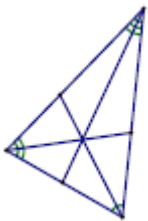
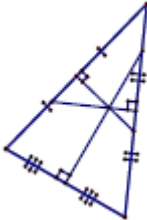
- **Median:**



- **Perpendicular Bisector:**



Points of Concurrency

Segment Name	Definition	Point of Concurrency	Sketch of Point
M Median	A line joining a vertex to the midpoint of the opposite side	C Centroid	
A Angle Bisector	A line which cuts an angle into two equal halves	I Incenter	
P Perpendicular Bisector	Perpendicular line through each side's midpoint	C Circumcenter	
A Altitude	A perpendicular line from each vertex of the triangle to the opposite side	O Orthocenter	