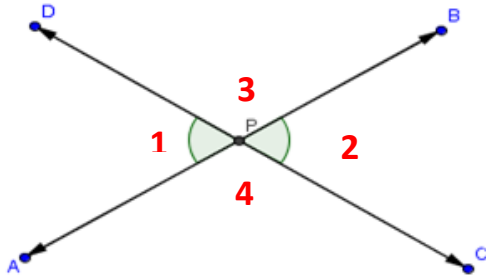


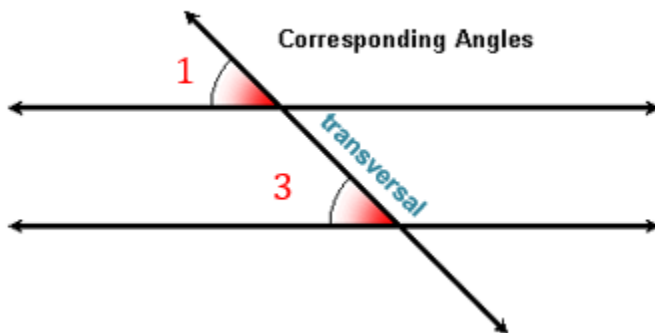
Geometry



Remember vertical angles?

$$\angle 1 = \angle 2$$

$$\angle 3 = \angle 4$$

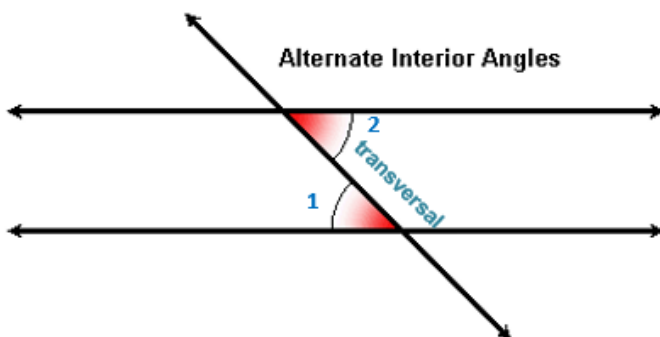


- A **transversal** is a **line** that passes through two **lines** in the same plane at two distinct points.

- The angles in matching corners are called **Corresponding Angles**.

- When the lines are parallel, the **Corresponding Angles** are equal

$$\angle 1 = \angle 3$$

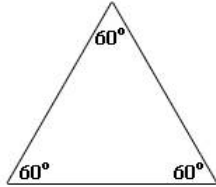


- The **angles** that are formed on opposite sides of the transversal and inside the two lines are **Alternate Interior Angles**.

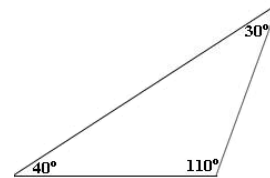
- When the lines are parallel, the **Alternate Interior Angles** are equal.

$$\angle 1 = \angle 2$$

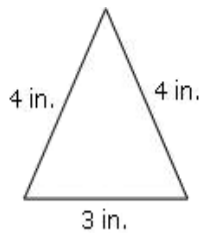
Triangles:



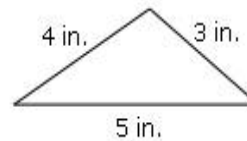
Acute triangle has all acute angles, not only 60°



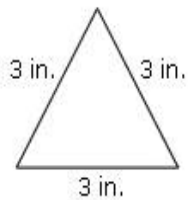
Obtuse triangle has an obtuse angle.



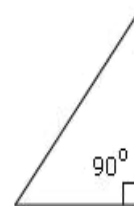
Isosceles triangle has two equal sides



Scalene triangle that has three unequal sides



Equilateral triangle has three equal sides



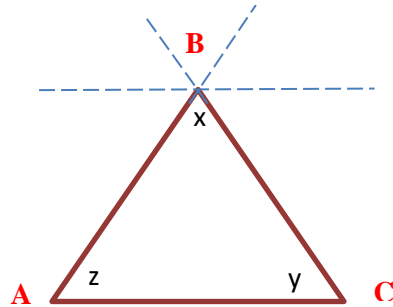
Right triangle has a right angle.

Triangle properties:

Sum of interior angles of any triangle ($\forall \Delta$) is 180° .

$$\angle x + \angle y + \angle z = 180^\circ$$

Proof:



In any triangle ($\forall \Delta$) the sum of 2 sides is always greater than the third.

$$(\forall \Delta ABC, AB + BC > AC)$$

In **any triangle**,

- the **largest** interior **angle** is **opposite** the **largest side**.
- the **smallest** interior **angle** is **opposite** the **smallest side**
- the middle-sized interior angle is **opposite** the middle-sized side