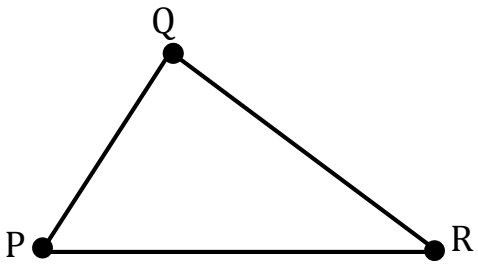
NOTES 5.1 – CLASSIFYING TRIANGLES

Objective:_____

_____

TERM	DESCRIPTION	SKETCH
Triangle		

A triangle is made up of three components:



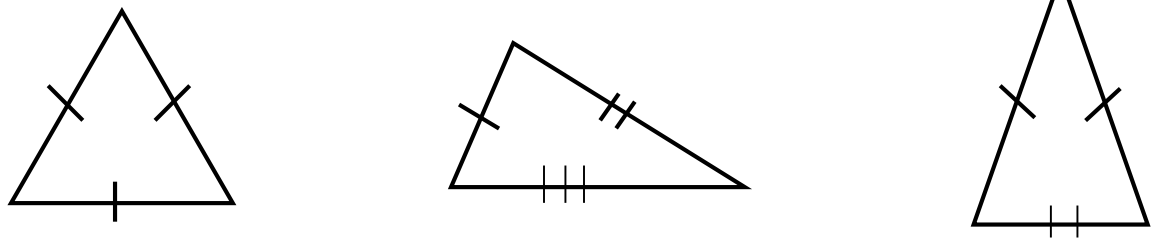
Vertices:

Sides:

Angles:

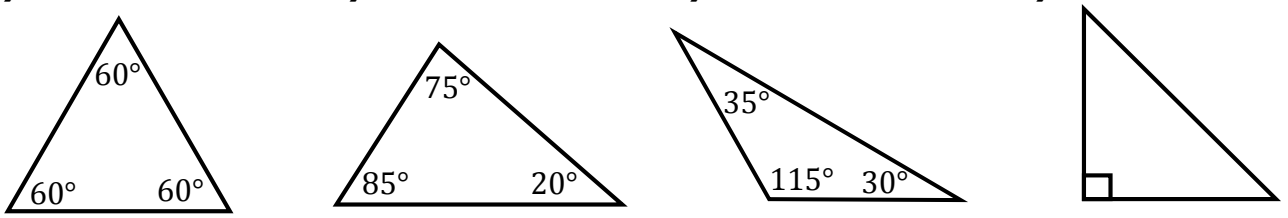
EXAMPLE 1: Classify each of the triangles by SIDES.

a)_____ **b)**_____ **c)**_____



EXAMPLE 2: Classify each of the triangles by ANGLES.

a)_____ **b)**_____ **c)**_____ **d)**_____

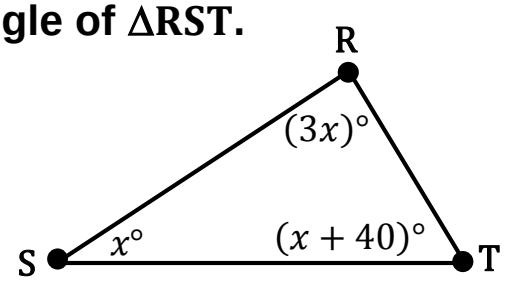


Triangles can be classified by either angles or sides.

Acute	Triangle Sum Theorem
Obtuse	Isosceles
Right	Scalene
Equiangular	Equilateral

EXAMPLE 3: Find the measure of the third angle of a triangle, if the first angle has a measure of $66°$ and the second angle measures $37°$.

EXAMPLE 4: Find the measure of each angle of ΔRST.

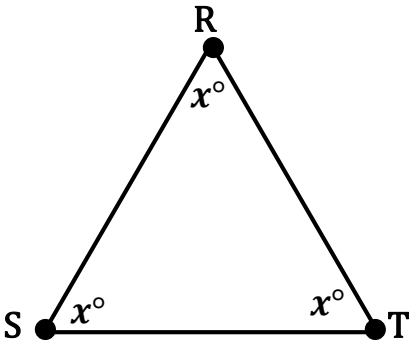


$m\angle R =$ _____

$m\angle S =$ _____

$m\angle T =$ _____

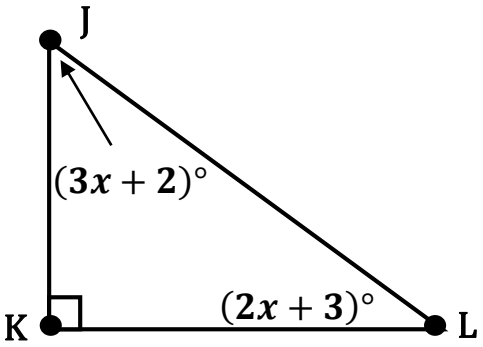
EXAMPLE 5: Find the value of 'x'.



$x =$_____

Based on this example, we can say that each angle of an equiangular triangle is $60°$.

EXAMPLE 6: Find the value of 'x'.



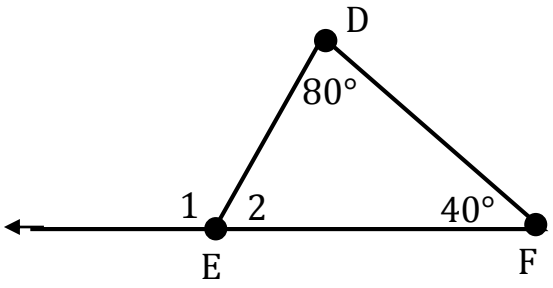
$x =$ _____

$\angle J$ and $\angle L$ are classified as ***acute angles.*** Since their sum is $90°$, we can say that the acute angles of a right triangle are ***complementary.***

An exterior angle of a triangle is formed by one side of the triangle and the extension of an adjacent side.

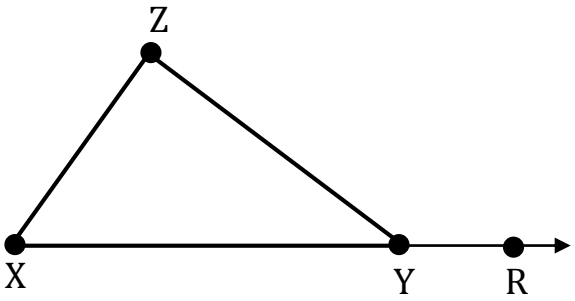
To find the measure of an exterior angle of a triangle, add the two remote interior angles.

EXAMPLE 7: Find the measure of $\angle 1$.



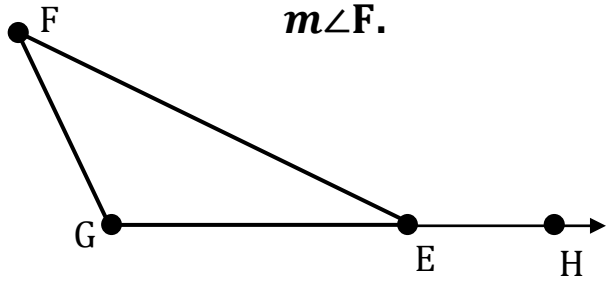
$m\angle 1 =$ _____

EXAMPLE 8: In ΔXYZ, $m\angle X = 63°$ and $m\angle XYZ = 53°$, find $m\angle ZYR$.



$m\angle ZYR =$ _____

EXAMPLE 9: In ΔEFG, $m\angle G = 100°$ and $m\angle FEH = 3 \cdot m\angle F$. Find $m\angle F$.



$m\angle F =$ _____