Winston 9/18/17

Introductions to Triangles

Classify by ANGLES:

Acute: ∠ less than 90° (all are acute)

Obtuse: ∠ more than 90° (1 Angle)

Right: ∠ equals 90° (1 angle)

Classify by SIDES:

Equilateral: all sides are the same (EQUAL)

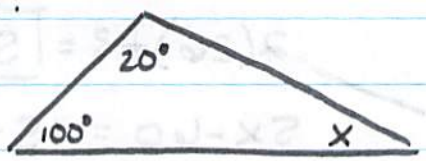
Scalene: no side lengths are the same

Isosceles: at least 2 sides are the same

*Triangle Sum Theorem - the sum of the angle measures of a △ is 180°.

$m\angle A + m\angle B + m\angle C = 180°$

Ex:



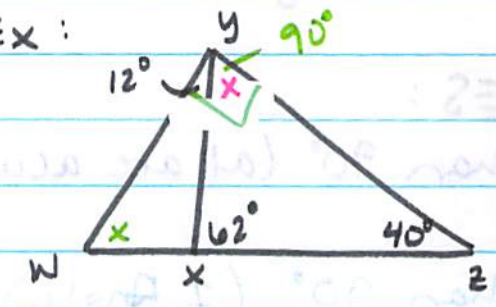
$100 + 20 + x = 180$

$120 + x = 180$

$-120 \quad -120$

$\boxed{x = 60}$

Ex:



Find $m\angle XYZ$

$62+40+x=180$

$102+x=180$

$-102 \quad -102$

$x=78$

$\boxed{m\angle XYZ = 78°}$

Find $m\angle YWZ$

$40+90+x=180$

$130+x=180$

$-130 \quad -130$

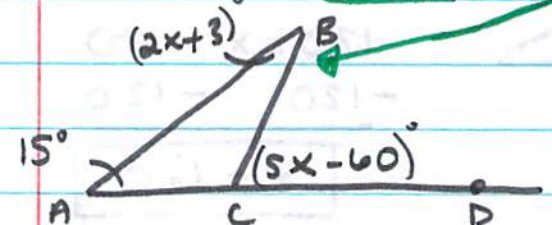
$x=50$

$\boxed{m\angle YWZ = 50}$

* Exterior Angle Theorem - the measure of an ext. $\angle$ of a Δ is equal to the sum of the measures of its remote int. $\angle$'s.

$m\angle 4 = m\angle 1 + m\angle 2$

Ex: Find $\boxed{m\angle B}$



$2(26)+3 = \boxed{55°}$

$5x-60 = 15+2x+3$

$5x-60 = 18+2x$

$-2x \quad -2x$

$3x-60 = 18$

$+60 \quad +60$

$3x = 78$

$\boxed{x=26}$