

1/22 Applying Triangle Sum Properties

ch 4.1

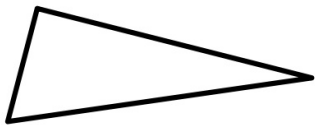
A triangle is a 3 sided polygon.

A triangle with the vertices A,B,C

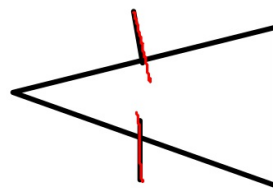
can be named $\triangle ABC$

Classifying triangles by side

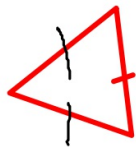
scalene: no congruent sides



isosceles: 2 congruent sides

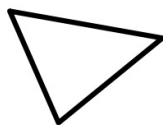


Equilateral: all sides congruent



Classify by angle

Acute



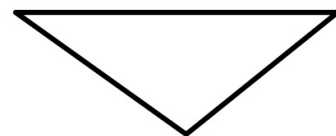
3 acute angles

Right



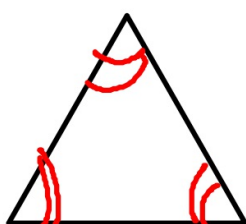
1 right angle
 90°

Obtuse



1 obtuse angle

Equilateral

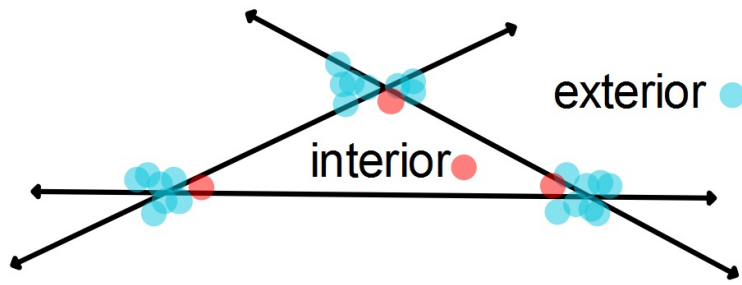


all 3 angles equal

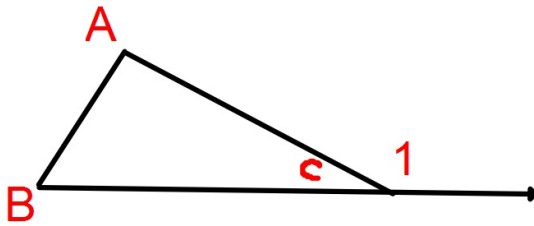
Acute angle Less than 90°
Right angle = 90°

Obtuse angle Greater than 90°

Angles



The 3 interior angles of a triangle always add up to 180°



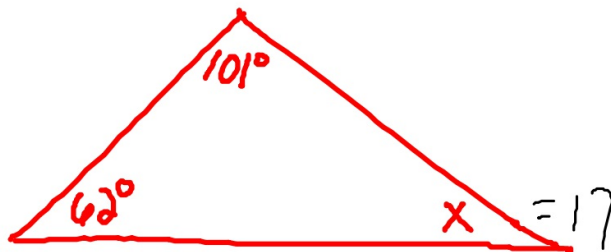
$$m\angle A + m\angle B = m\angle 1$$

also

$$180 - m\angle C = m\angle 1$$

Ex

find x



$$180 -$$

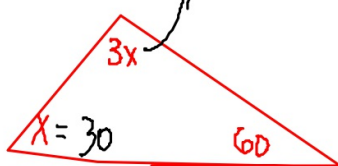
$$180 -$$

$$= 17$$

$$180 -$$

$$3 \cdot 30 = 90$$

$$101 + 62 = 163$$

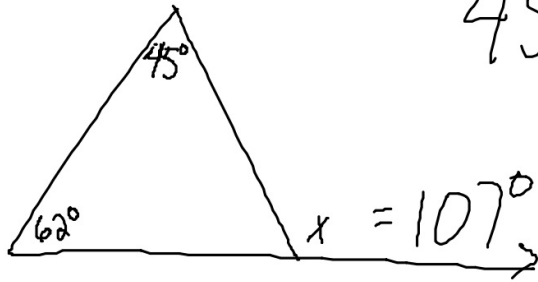


$$\begin{array}{r} 180 \\ -163 \\ \hline 17 \end{array}$$

$$3x + x + 60 = 180$$

$$\begin{array}{r} 4x + 60 = 180 \\ -60 \quad -60 \\ \hline \end{array}$$

$$\frac{4x}{4} = \frac{120}{4} \quad x = 30$$



$$45 + 62 = 107^\circ$$

1-16 Pg 211.

Home work:
pg 211 1-16