

Name, Date, Hour:

Key

Learning Target:

4.1: Apply Δ Sum Properties

Homework:

Day 1

BOX 1 (A, B + C are vertices)

Triangle: a polygon w/ three sides (ΔABC)

Classify by Sides

SCALED



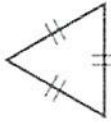
No \cong sides

ISOSCELES



Two \cong sides

EQUILATERAL



3 \cong sides

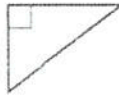
Classify by Angles

ACUTE TRIANGLE



3 acute \angle 's

RIGHT TRIANGLE



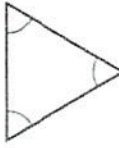
one right angle

OBTUSE TRIANGLE



one obtuse angle

EQUIANGULAR TRIANGLE

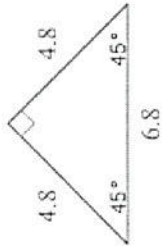


3 \cong \angle 's

BOX 2 - Classifying Triangles

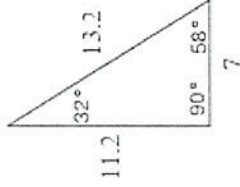
Classify each triangle by its angle measure and its side lengths.

a.



RIGHT ISOSCELES

b.

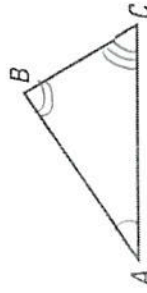


RIGHT SCALED

BOX 3 - Triangle Angle Sum Theorem

The sum of the measures of the interior angles of a $\Delta = 180^\circ$

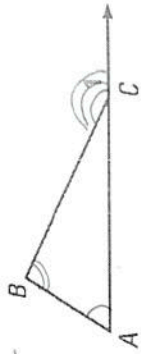
$m\angle A + m\angle B + m\angle C = 180^\circ$



BOX 4 - Exterior Angle Theorem

The measure of an exterior angle is equal to the sum of the measures of the two nonadjacent interior angles

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



BOX 5 - Using Exterior Angles Theorem

Find $m\angle JKM$

$$m\angle JKM = m\angle KJL + m\angle KLJ$$

$$2x - 5 = x + 70$$

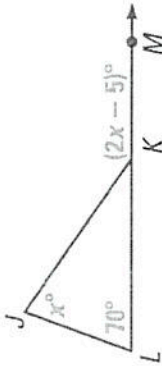
$$x - 5 = 70$$

$$x = 75$$

$$m\angle JKM = 2(75) - 5$$

$$m\angle JKM = 150 - 5$$

$$m\angle JKM = 145^\circ$$

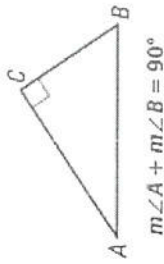


BOX 6

A corollary to a theorem is a statement that can be proved easily using the theorem.

Corollary to Triangle Sum Theorem

The acute angles of a right Δ are complementary



$$m\angle A + m\angle B = 90^\circ$$

Find the value of x .

$$x + 2x = 90$$

$$3x = 90$$

$$x = 30$$

