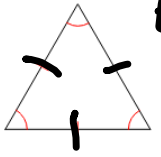
Bellwork: 6&9Sep

1. What do the tick markings mean as in:

Congruent

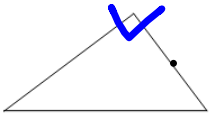
$\overline{AB} \cong \overline{BC}$

2. Classify the following triangles:

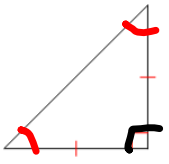
1) 

$\frac{180}{3} = 60°$

Equilateral
Acute

2) 

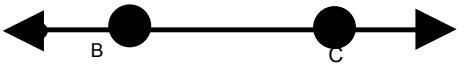
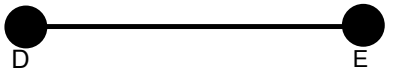
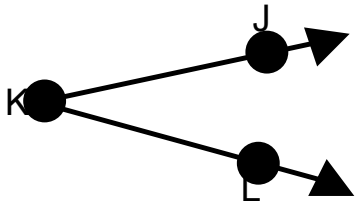
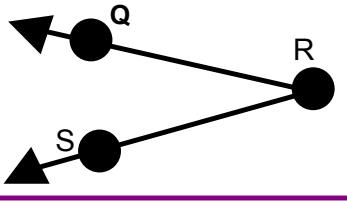
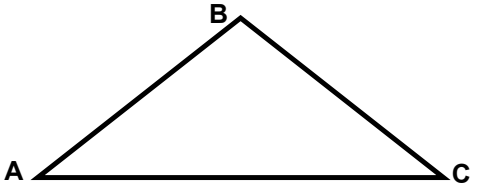
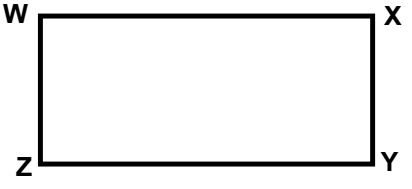
Scalene
Right

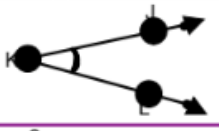
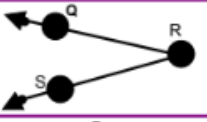
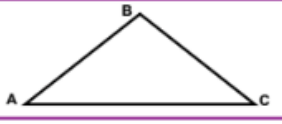
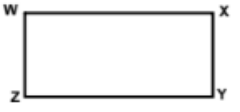
3) 

Isosceles
Right

4)

Isosceles
OBTUSE

Vocabulary	Drawing	Notation
Line:		$\overleftrightarrow{BC}$
Line segment:		$\overline{DE}$
Ray:		$\overrightarrow{FG}$
Angle: ~~$\angle LJK$~~		$\angle JKL$ $\angle K$ $\angle LKJ$
Measure of Angle:		$m\angle QRS$ $m\angle SRQ$ $m\angle R$
Triangle:		$\triangle ABC$
Quadrilateral:		$\square WXYZ$

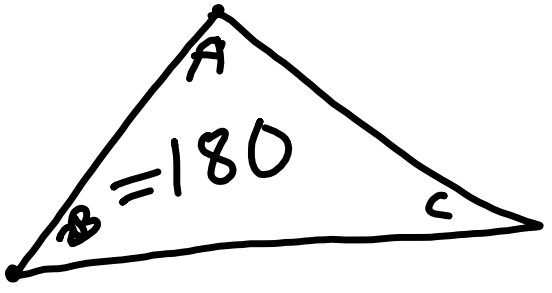
Vocabulary	Drawing	Notation
Line:		$\overleftrightarrow{BC}$
Line segment:		$\overline{DE}$
Ray:		$\overrightarrow{FG}$
Angle:		$\angle K$ $\angle JKL$ $\angle LKJ$
Measure of Angle:		$m\angle R$ $m\angle QRS$ $m\angle SRQ$
Triangle:		$\triangle ABC$
Quadrilateral:		$\square WXYZ$

1-4 Properties of Triangles

I can find missing angle measures in a triangle.

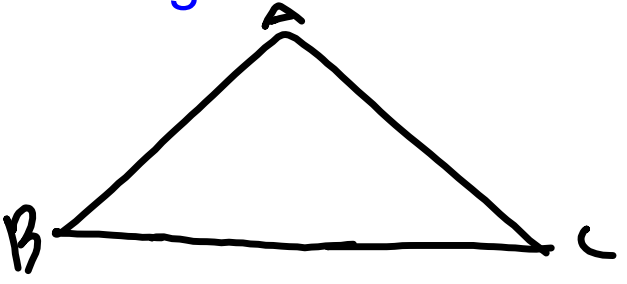
I can solve problems using properties of triangles (isosceles, midsegments, angle sum).

The Triangle Sum Theorem

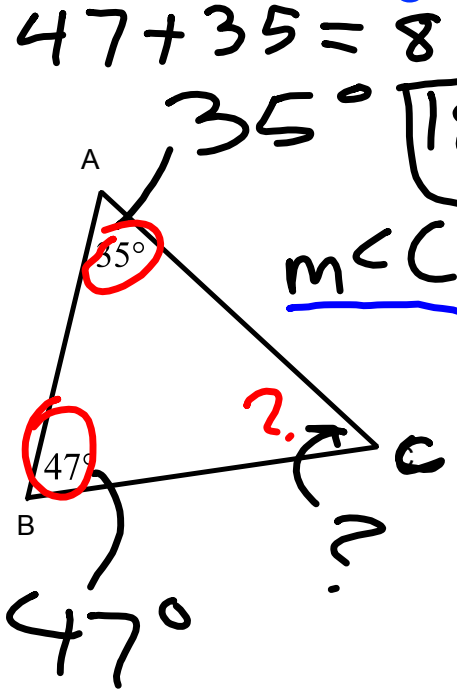


$m\angle A + m\angle B$
$m\angle C = 180$

The Triangle Sum Theorem:
The sum of the measures of the interior angles of a triangle is 180°.



Find the missing angle measures:

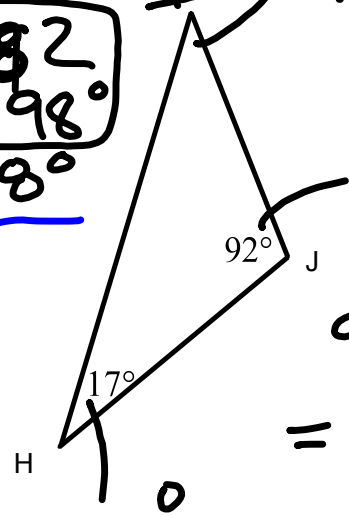


47+35=82

35°

180-82
=98°

m∠C=98°



m∠I=71°

92°

92+17
=109

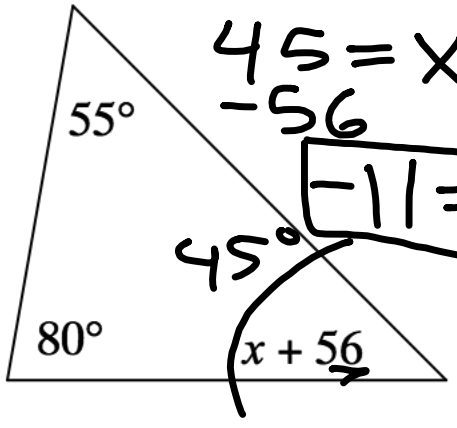
180-109
=71

17°

Find the value of x. Justify your answer (in words).

$55 + 80 = 135$

$180 - (\checkmark) = 45$



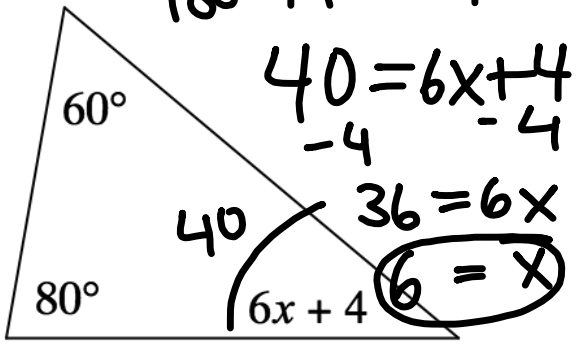
$45 = x + 56$

$-56 \quad -56$

$-11 = x$

$60 + 80 = 140$

$180 - 140 = 40$



$40 = 6x + 4$

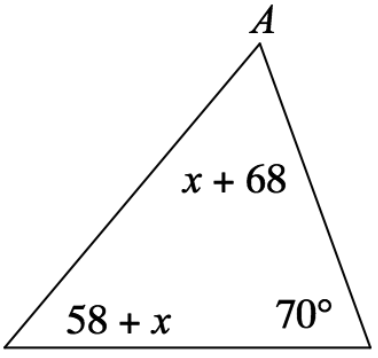
$-4 \quad -4$

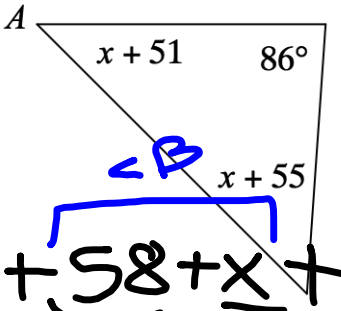
$36 = 6x$

$6 = x$

Find the measure of angle A. Explain your reasoning (in words).

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





$\angle A \quad \angle B \quad \angle C$

$180 = x+68 + 58+x + 70$

$180 = 196 + 2x$

$-196 \quad -196$

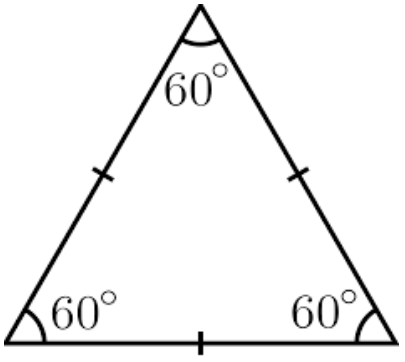
$-16 = 2x \qquad x = -8$

$x + 68$

$m\angle A = 60°$

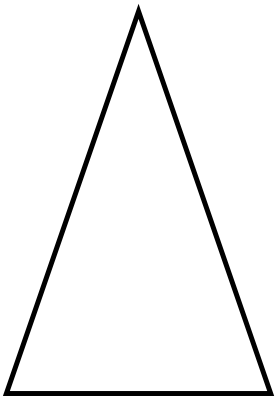
Equilateral Triangle:

All angles in the triangle are congruent.
All sides in the triangle are congruent.



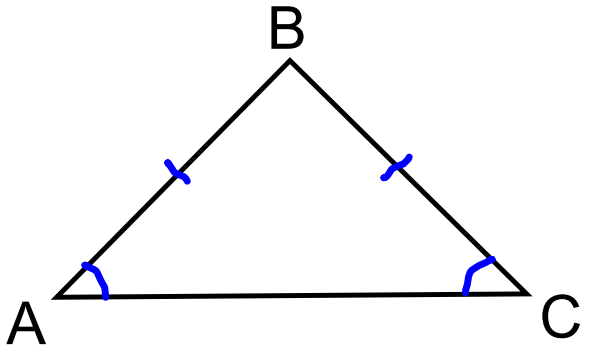
Isosceles Triangle:

At least 2 sides (called the *legs*) of the triangles are congruent.



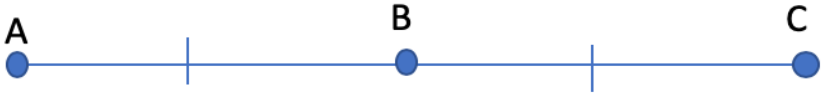
Base Angles

Find the measure of all angles in triangle ABC if angle B is 80^{O}.

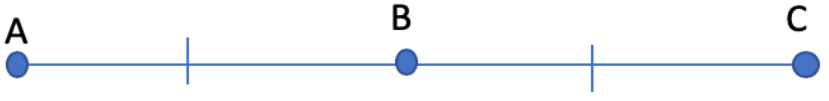


What is a midsegment?

What is a midsegment?

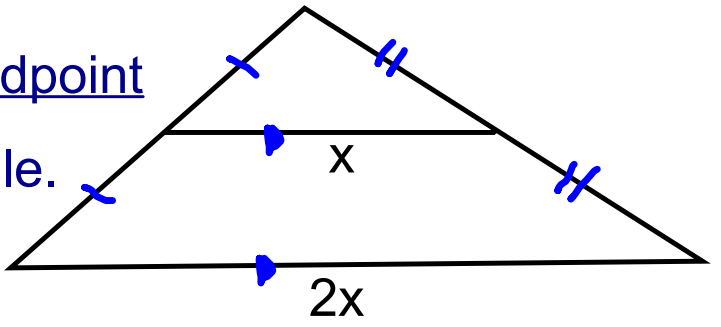


What is a midsegment?

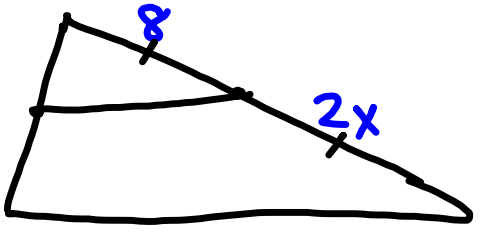


Point B is the midpoint

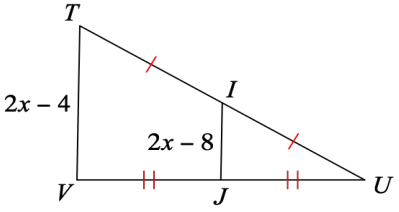
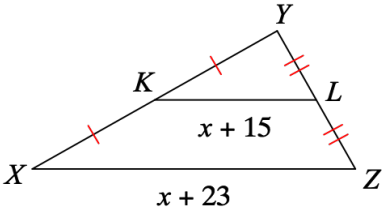
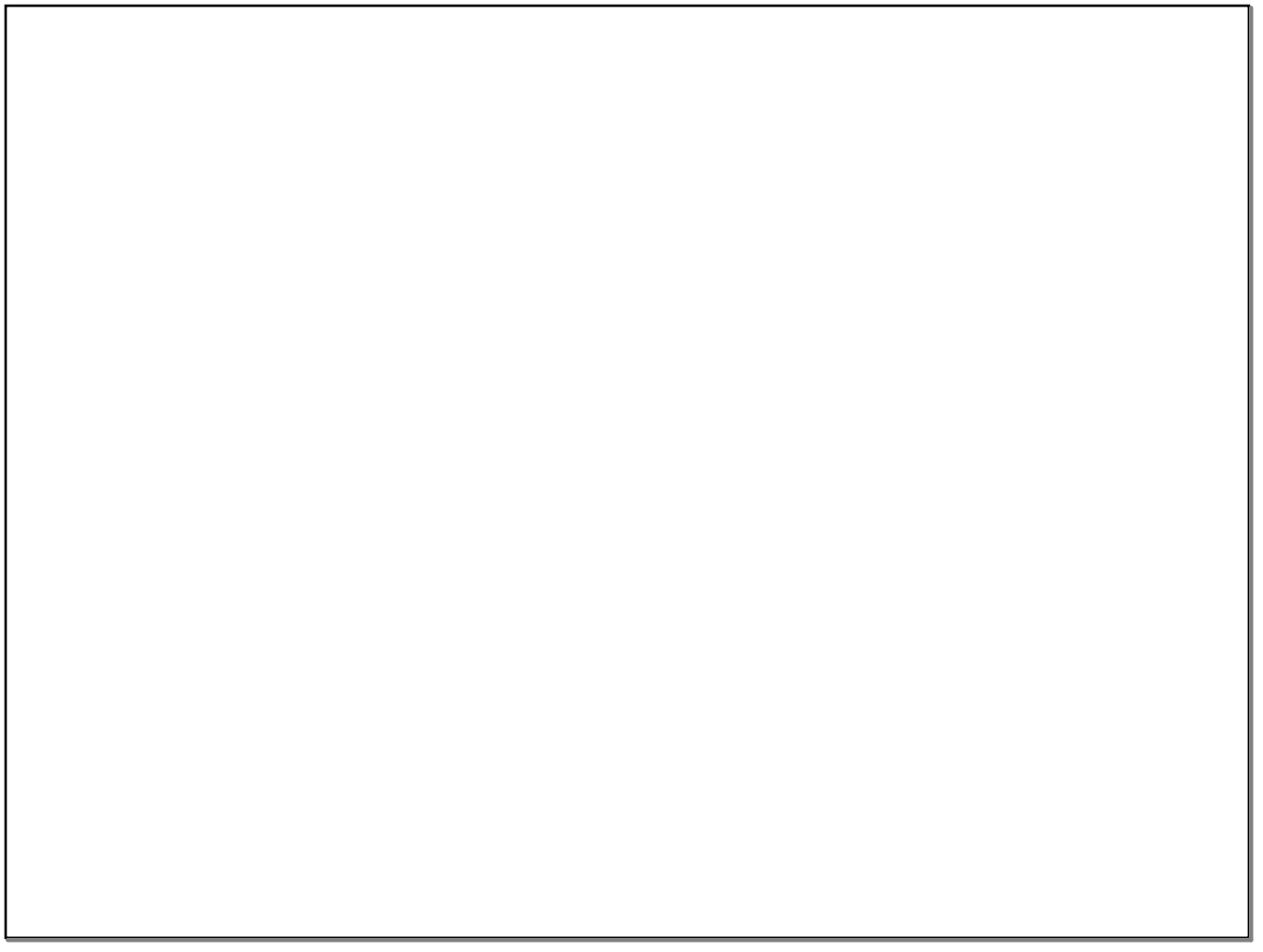
Midsegment - a segment that connects the midpoint of 2 sides of a triangle. It is || to the third side of the triangle and half as long.



Ex:



$\frac{8}{2} = \frac{2x}{2}$

$x = 4$

Solve for x and justify your answer (with words).