Geometry CC – Mr. Valentino
Unit 5 Lesson 1: Congruence

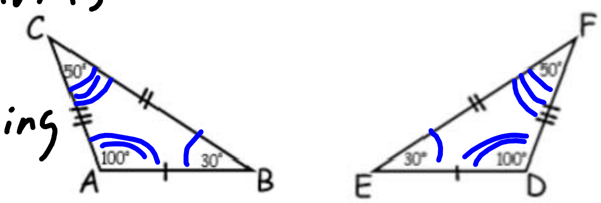
Name: ______________________
Date: ______________ Period: ______

Aim: What is congruence?

☆ corresponding parts of congruent triangles are congruent

Do Now: How can we tell ΔABC ≅ ΔDEF?

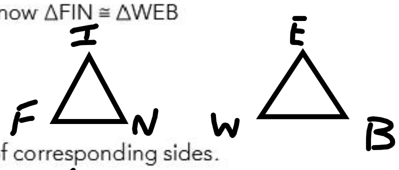
- congruent corresponding side lengths
- congruent corresponding angle measures



Congruent -

Two shapes are congruent when you can turn, flip, or slide one so it fits exactly on the other.

Suppose you know ΔFIN ≅ ΔWEB



Name 3 pairs of corresponding sides.

- $\overline{FI} \cong \overline{WE}$
- $\overline{IN} \cong \overline{EB}$
- $\overline{FN} \cong \overline{WB}$

Name 3 pairs of corresponding angles.

- $\measuredangle F \cong \measuredangle W$
- $\measuredangle N \cong \measuredangle B$
- $\measuredangle I \cong \measuredangle E$

Is it correct to say ΔNIF ≅ ΔBEW?

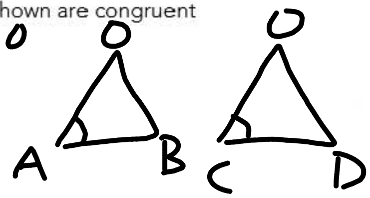
Yeah!

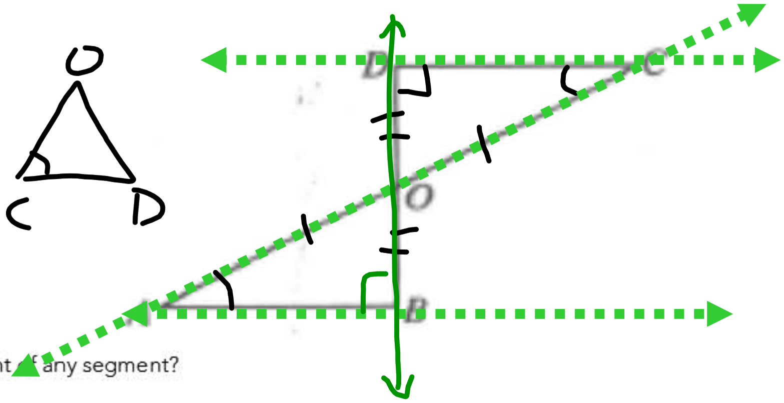
Is it correct to say ΔINF ≅ ΔEBW?

Yeah!

The two triangles shown are congruent

$\Delta ABO \cong$ ΔCDO





$\angle A \cong$ $\angle C$

$\overline{AO} \cong$ $\overline{CO}$

$\overline{BO} \cong$ $\overline{DO}$

Can you conclude that O is the midpoint of any segment?

Yes.

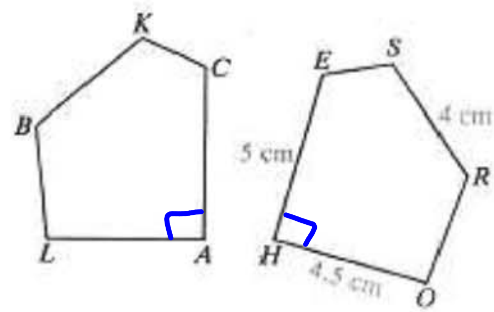
Explain how you can conclude DC||AB:

alternate interior angles → lines must be parallel

Suppose you know that DB ⊥ DC. Explain how you can conclude DB ⊥ BA

alternate interior angles are congruent

The pentagons shown are congruent:



B corresponds to R

BLACK ≅ ROHES

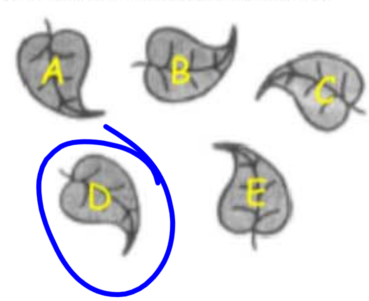
Angle C ≅ Angle E

KB = 4 cm

If CA ⊥ LA, name two right angles in the figures.

∡A and ∡H

The five leaves shown are all congruent, but one differs from the others. Which one is different and how?

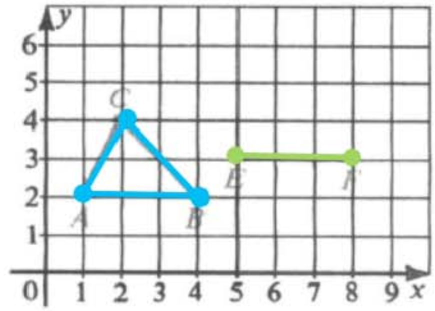


Name the coordinates of points A, B and C.

A (,)

B (,)

C (,)



Name the coordinates of a point D such that $\Delta ABC \cong \Delta ABD$

Name the coordinates of a point G such that $\Delta ABC \cong \Delta EFG$.

Is there another location for G such that $\Delta ABC \cong \Delta EFG$?

Name the coordinates of two possible points H such that $\Delta ABC \cong \Delta FEH$.