

Vocabulary Sheet for Lesson 4-1

Definition	Diagram/ Notes
<u>Facts of Congruence:</u> Two shapes can only be congruent if you could place them on top of each other and have the corresponding sides and angles match up perfectly	

Stating Congruence:

Using the previous pentagons we can make the following statements:

- Pentagon ABCDE is congruent to pentagon XYZVW because:
- $m\angle A = m\angle X$ $AB = XY$
- $m\angle B = m\angle Y$ $BC = YZ$
- $m\angle C = m\angle Z$ $CD = ZV$
- $m\angle D = m\angle V$ $DE = VW$
- $m\angle E = m\angle W$ $EA = WX$

Corresponding Parts:

The parts that are in the same place and have the same size in each shape are called corresponding parts

For triangles we can say that corresponding parts of congruent triangles are congruent (CPCTC) but this rule works for all shapes

Example 1:

- Suppose you know that $\triangle FIN$ is congruent to $\triangle WEB$.
- Name three pairs of corresponding sides
 $\overline{FI} \cong \overline{WE}$ $\overline{IN} \cong \overline{EB}$ $\overline{FN} \cong \overline{WB}$
- Name three pairs of corresponding angles
 $\angle F \cong \angle W$ $\angle N \cong \angle B$ $\angle I \cong \angle E$

- Is it correct to say that $\triangle NIF$ is congruent to $\triangle BEW$? Why or why not?

yes, the corresponding parts still match up

- Is it correct to say that $\triangle NIF$ is congruent to $\triangle EWB$?

Why or why not NO, corresponding parts don't match up

Example 2

- The two triangles shown are congruent

- $\triangle ABO \cong \triangle COD$

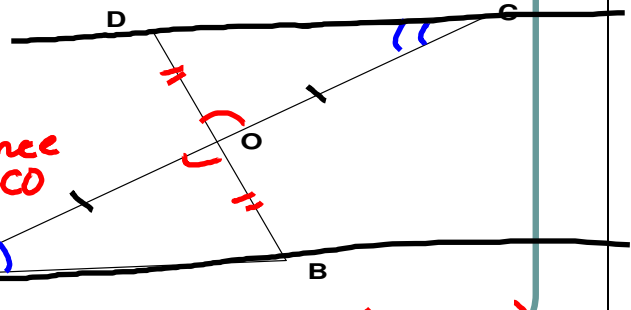
- $m\angle A = m\angle C$

- $AO = CO$

- Can you deduce that O is a midpoint? *Yes, since $AO = CO$*

- Can you deduce that segment DC $\parallel$ segment AB?

Yes, since alt. int. angles are $\cong$ ($\angle A \cong \angle C$)



Example 3:

- Plot the given points on the graph paper provided. Draw $\triangle FAT$. Locate point C so that $\triangle FAT$ is congruent to $\triangle CAT$

- $F(7, 5)$

- $A(-2, 2)$

- $T(5, 2)$

