Geo 3.1
HW

3.1 Congruent Figures

Use your book for the DEFINITION: **Congruent Triangles** ⇔
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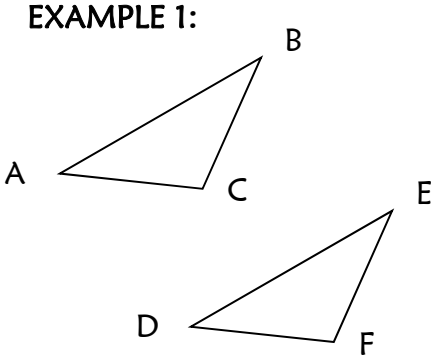
EXAMPLE 1:



If ΔABC ≅ ΔDEF

Which angles are ≅ ?

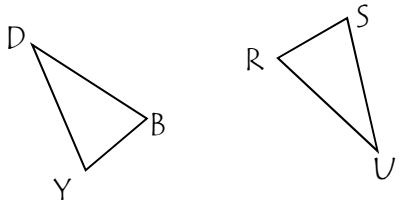
∠A ≅ ∠D
∠B ≅ ∠E
∠C ≅ ∠F

Which segments are ≅ ?

$\overline{AB} \cong \overline{DE}$
$\overline{BC} \cong \overline{EF}$
$\overline{AC} \cong \overline{DF}$

It would be incorrect to say: ΔABC ≅ ΔFED….why? yes! ∠A ≇ ∠F

EXAMPLE 2:



If Δ, **ΔYDB ≅ ΔSUR** (be careful to match corresponding angles/sides)

Which angles are ≅ ?

∠Y ≅ ∠S
∠D ≅ ∠U
∠B ≅ ∠R

Which segs are ≅ ?

$\overline{YD} \cong \overline{SU}$
$\overline{DB} \cong \overline{UR}$
$\overline{YB} \cong \overline{SR}$

For 3-6, complete the statement. (no need for diagrams!)

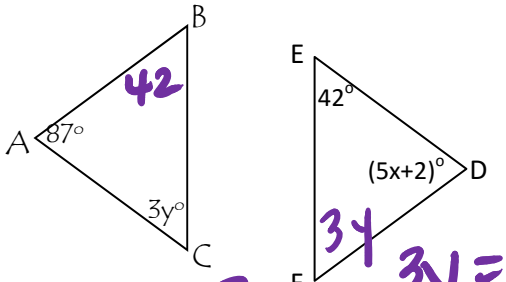
3) If △PMC ≅ △VTK, then $\overline{PC} \cong$ $\overline{VK}$.

4) If △LFA ≅ △VEN, then ∠E ≅ ∠F.

5) If △DCN ≅ △WBL, then $\overline{BW} \cong$ $\overline{CD}$.

6) If △ABD ≅ △CDB, then △DAB ≅ ΔBCD

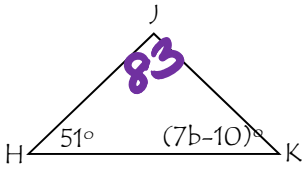
7) Given △ABC ≅ △DEF, find *x* and *y*.



5x+2=87
x=17

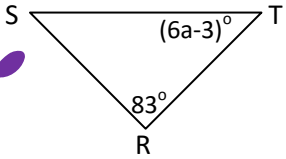
3y=51
y=17

8) Given △HJK ≅ △TRS, find *a* and *b*.



6a-3=51
a=9

7b-10=46
b=8



Use your book for DEFINITION: **Reflexive Property:**

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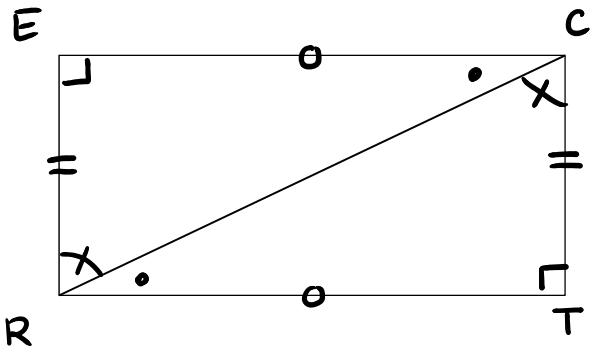
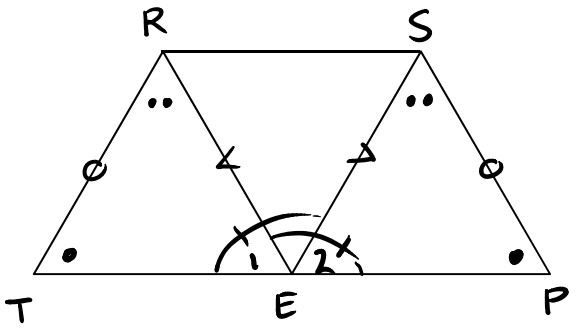


a. Why is $\overline{RC} \cong \overline{RC}$

It is ≅ to itself

b. Fill in the blank (watch for correspondence!)

If ΔERC ≅ Δ TCR



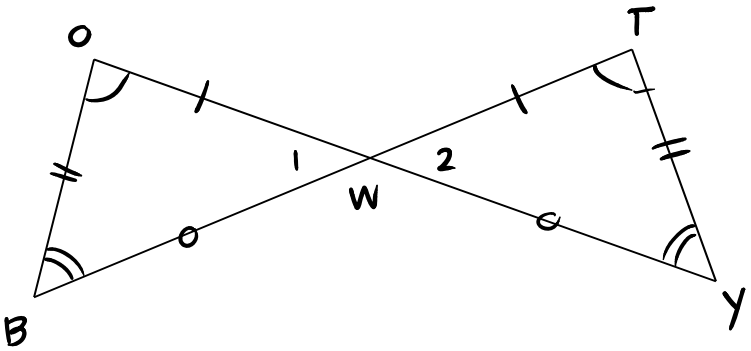
Given: E is the midpt. of $\overline{TP}$

a. Why is $\measuredangle 1 \cong \measuredangle 2$?

Subtraction

b. Fill in the blank

ΔSPE ≅ Δ RTE



a. Why is $\measuredangle 1 \cong \measuredangle 2$?

vertical angles are ≅

b. Fill in the blank

ΔBOW ≅ Δ YTW