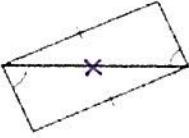


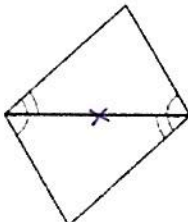
Geometry CC – Unit 5 Review

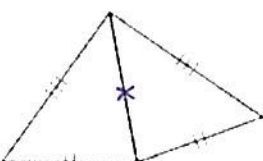
Important concepts/terms to remember:

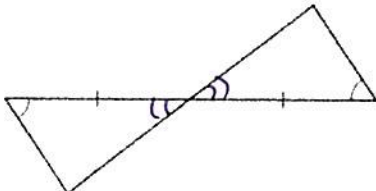
- SSS Congruence
- SAS Congruence
- AAS Congruence
- ASA Congruence
- HL Congruence
- CPCTC
- Reflexive Property
- Addition Postulate
- Subtraction Postulate

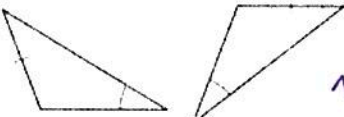
State if the below triangles are congruent and, if so, by what postulate:

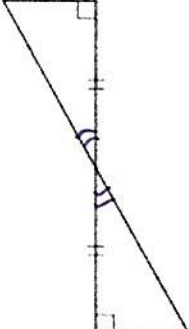
1)  *NO CONGRUENCE*
** this is ASS congruence*

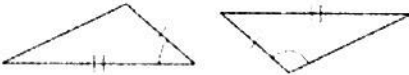
2)  *ASA*


3)  *SSS*

4)  *ASA*

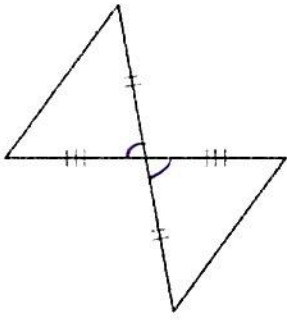
5)  *NO CONGRUENCE*

6)  *ASA*
** this is not HL*

7)  *SAS*

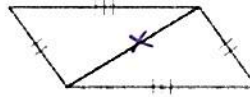
8)  *SSS*

9)



SAS

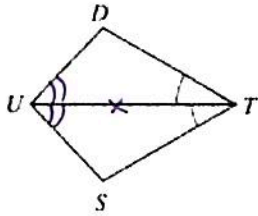
10)



SSS

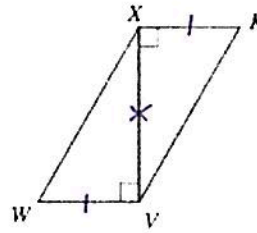
State what additional information is needed in order to know that the triangles are congruent for the given reason:

11) ASA



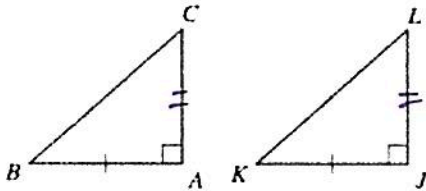
$\angle DUT \cong \angle SUT$

12) SAS



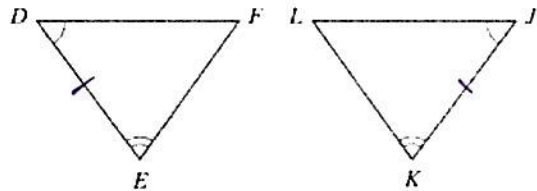
$\overline{WV} \cong \overline{KV}$

13) SAS



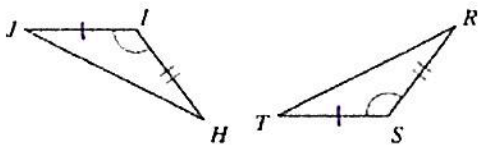
$\overline{CA} \cong \overline{LJ}$

14) ASA



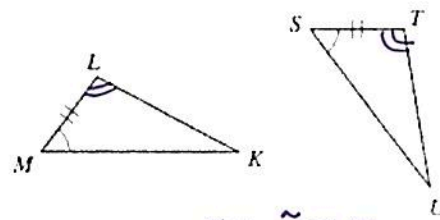
$\overline{DE} \cong \overline{JK}$

15) SAS



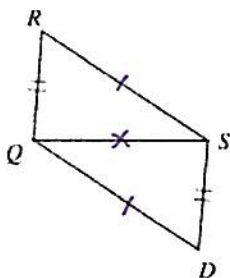
$\overline{JI} \cong \overline{TS}$

16) ASA



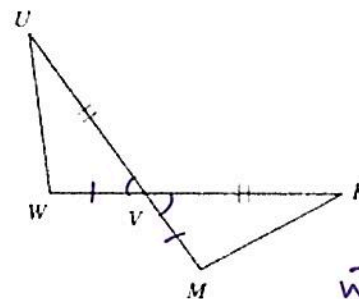
$\angle L \cong \angle T$

17) SSS



$\overline{RS} \cong \overline{DS}$

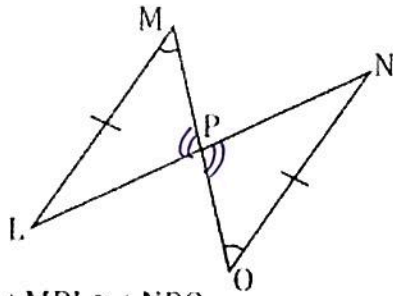
18) SAS



$\overline{WV} \cong \overline{MV}$

Fill in any missing pieces in the below proofs:

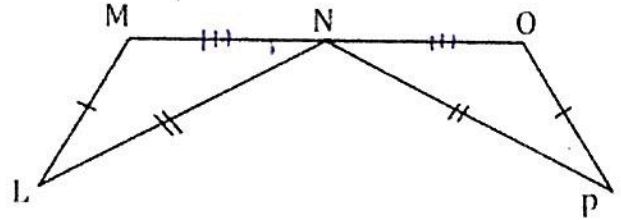
19. Given: $\overline{LM} \cong \overline{NO}$, and $\angle M \cong \angle O$



Prove: $\triangle MPL \cong \triangle NPO$

Statements	Reasons
1. $\overline{LM} \cong \overline{NO}$	1. Given
2. $\angle M \cong \angle O$	2. Given
3. $\angle MPL \cong \angle OPN$	3. Vertical \angle 's are \cong
4. $\triangle MPL \cong \triangle NPO$	4. AAS \cong AAS

20. Given: N is the midpoint of \overline{MO} , $\overline{LM} \cong \overline{OP}$, and $\overline{LN} \cong \overline{PN}$



Prove: $\triangle LMN \cong \triangle PON$

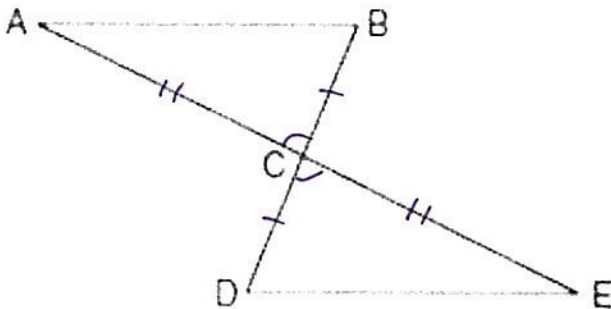
Statements	Reasons
1. $\overline{LM} \cong \overline{OP}$	1. Given
2. $\overline{LN} \cong \overline{PN}$	2. Given
3. N is the Midpoint of \overline{MO}	3. Given
4. $\overline{MN} \cong \overline{ON}$	4. Midpoint A midpoint divides a segment into 2 \cong segments
5. $\triangle LMN \cong \triangle PON$	5. SSS \cong SSS

Complete the following proofs:

21.

Given: C is the midpoint of \overline{BD} and \overline{AE}

Prove: $\triangle ABC \cong \triangle EDC$



Statement	Reason
① C is the midpoint of \overline{BD} and \overline{AE}	① Given
② $\overline{BC} \cong \overline{DC}$	② A midpoint divides a segment into 2 \cong segments
③ $\overline{AC} \cong \overline{EC}$	③ A midpoint divides a segment into 2 \cong segments
④ $\angle ACB \cong \angle ECD$	④ Vertical \angle 's are \cong
⑤ $\triangle ABC \cong \triangle EDC$	⑤ SAS \cong SAS

22.

Given: $\angle 1 \cong \angle 2$

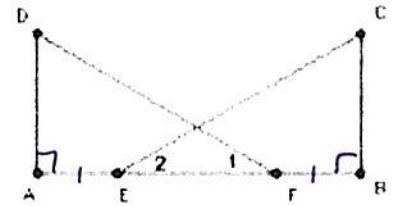
$DA \perp AB$

$CB \perp AB$

$AE \cong BF$

Prove: $DF \cong CE$

Statement	Reason
① $\angle 1 \cong \angle 2$	① Given
② $DA \perp AB$, $CB \perp AB$	② Given
③ $\angle A$ and $\angle B$ are right \angle 's	③ \perp lines form right \angle 's
④ _____ $\angle A \cong \angle B$	④ _____ All right \angle 's are \cong
⑤ $\overline{AE} \cong \overline{BF}$	⑤ Given
⑥ $\overline{EF} \cong \overline{EF}$	⑥ Reflexive Property
⑦ $\overline{AF} \cong \overline{BE}$	⑦ Addition Postulate
⑧ $\triangle DAF \cong \triangle CBE$	⑧ ASA \cong ASA
⑨ $\overline{DF} \cong \overline{CE}$	⑨ CPCTC



23.

Given: Triangle ABC is isosceles with $AB \cong AC$

AX is a Median to BC

Prove: $\angle BAX \cong \angle CAX$

Statement	Reason
① $\triangle ABC$ is isosceles w/ $\overline{AB} \cong \overline{AC}$	① Given
② AX is a median to BC	② Given
③ $\overline{BX} \cong \overline{CX}$	③ Definition of a median (a median divides the opposite segment into 2 \cong segments)
④ $\overline{AX} \cong \overline{AX}$	④ Reflexive Property
⑤ $\triangle ABX \cong \triangle ACX$	⑤ SSS \cong SSS
⑥ $\angle BAX \cong \angle CAX$	⑥ CPCTC

