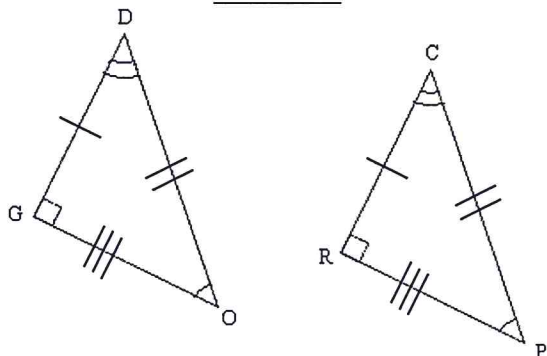


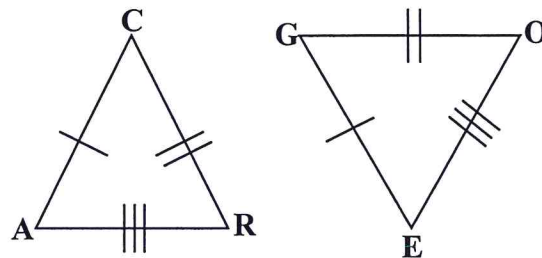
Topic 9 Triangle Congruence Test Review

I. Name the congruent triangles.

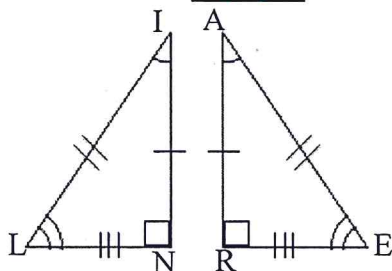
1. $\triangle OGD \cong \triangle PRC$



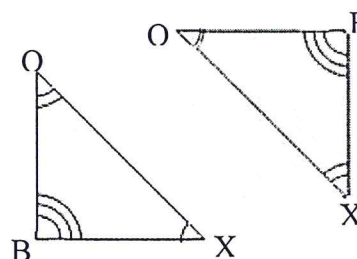
2. $\triangle RAC \cong \triangle DEG$



3. $\triangle LIN \cong \triangle EAR$

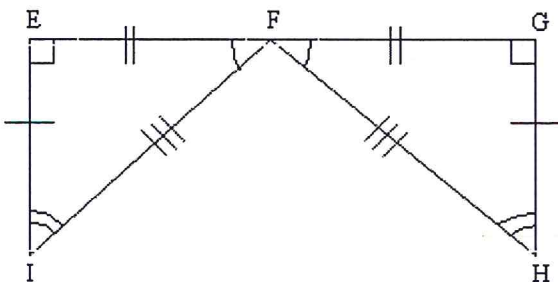


4. $\triangle FOX \cong \triangle BXO$



II. Name the congruent triangle and the congruent parts.

5.



$\triangle FGH \cong \triangle FEI$

$\triangle EFI \cong \triangle GFI$

$\angle G \cong \angle E$

$\angle H \cong \angle I$

$\overline{FG} \cong \overline{EI}$

$\overline{GH} \cong \overline{EI}$

$\overline{FH} \cong \overline{FI}$

Use the congruency statement to fill in the corresponding congruent parts.

6. $\triangle EFI \cong \triangle HGI$

$\angle E \cong \angle H$

$\overline{FE} \cong \overline{GI}$

$\angle EFI \cong \angle HGI$

$\overline{FI} \cong \overline{GI}$

$\angle FIE \cong \angle GII$

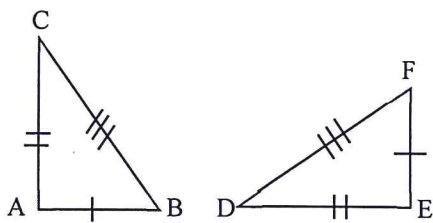
$\overline{IE} \cong \overline{IH}$

Triangle Congruence Worksheet #1

For each pair of triangles, tell which postulates, **if any**, make the triangles congruent.

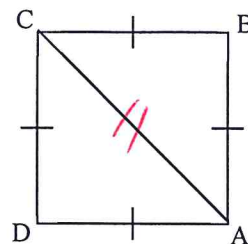
10. $\triangle ABC \cong \triangle EFD$

SSS



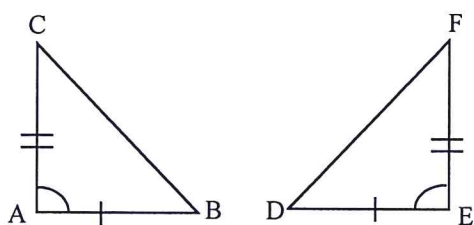
11. $\triangle ABC \cong \triangle CDA$

SSS



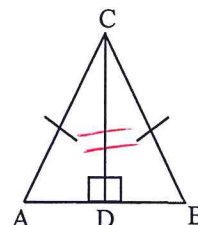
12. $\triangle ABC \cong \triangle EFD$

SAS



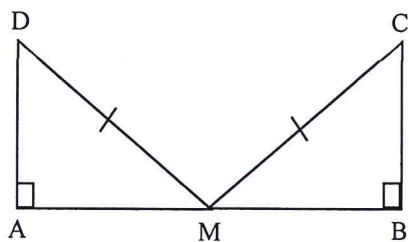
13. $\triangle ADC \cong \triangle BDC$

NP



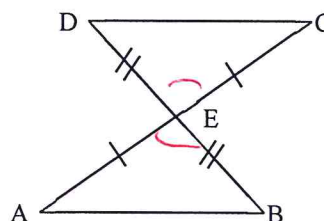
14. $\triangle MAD \cong \triangle MBC$

NP



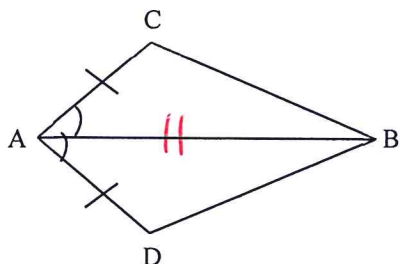
15. $\triangle ABE \cong \triangle CDE$

SAS



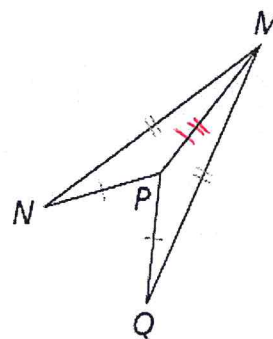
16. $\triangle ACB \cong \triangle ADB$

SAS



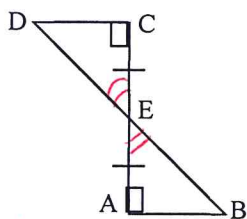
17. $\triangle MNP \cong \triangle MQP$

SSS



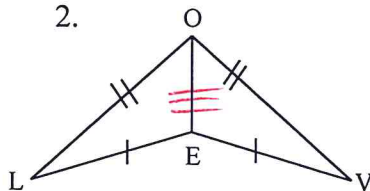
For each pair of triangles, tell: (a) Are they congruent (b) Write the triangle congruency statement. (c) Give the postulate that makes them congruent.

1.



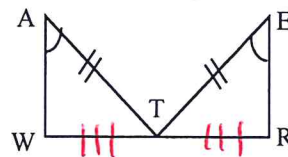
- a. yes
 b. $\triangle DCE \cong \triangle BAE$
 c. ASA

2.



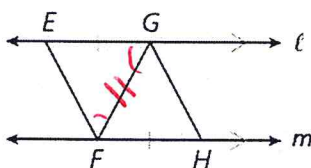
- a. yes
 b. $\triangle OLE \cong \triangle OVE$
 c. SSS

3. Given: T is the midpoint of $\overline{WR}$



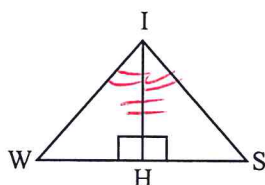
- a. NO
 b. $\triangle \underline{\hspace{1cm}} \cong \triangle \underline{\hspace{1cm}}$
 c.

4.



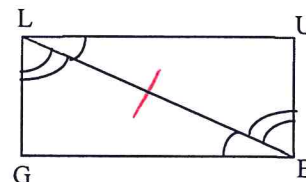
- a. yes
 b. $\triangle EGF \cong \triangle HGF$
 c. SAS

5. Given: $\overrightarrow{IH}$ Bisects $\angle WIS$



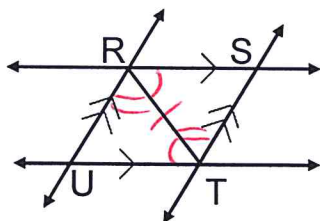
- a. yes
 b. $\triangle WHI \cong \triangle SHI$
 c. ASA

6.



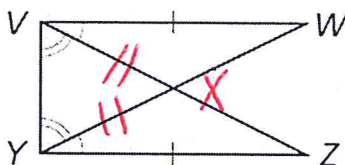
- a. yes
 b. $\triangle LEG \cong \triangle ELU$
 c. ASA

7.



- a. yes
 b. $\triangle RST \cong \triangle TRU$
 c. ASA

8.

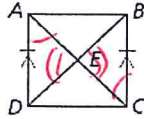


- a. yes
 b. $\triangle VYX \cong \triangle WYX$
 c. SAS

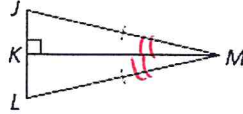
For each problem below, write a two-column proof on a separate piece of paper.

I. Proving Triangles Congruent:

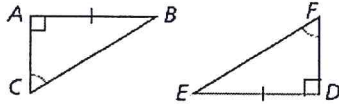
1. Use AAS to prove the triangles congruent.
Given: $\overline{AD} \parallel \overline{BC}$, $\overline{AD} \cong \overline{CB}$
Prove: $\triangle AED \cong \triangle CEB$



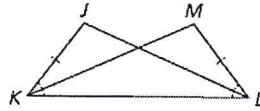
2. Given: $\overline{KM} \perp \overline{JL}$, $\overline{JM} \cong \overline{LM}$, $\angle JMK \cong \angle LMK$
Prove: $\triangle JKM \cong \triangle LKM$



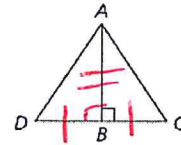
3. Given: $\overline{AB} \cong \overline{DE}$, $\angle C \cong \angle F$
Prove: $\triangle ABC \cong \triangle DEF$



4. Given: $\overline{JK} \cong \overline{ML}$, $\angle JKL \cong \angle MLK$
Prove: $\triangle JKL \cong \triangle MLK$

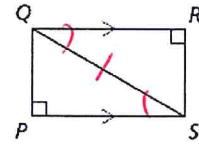


5. Given: B is the midpoint of $\overline{DC}$, $\overline{AB} \perp \overline{DC}$
Prove: $\triangle ABD \cong \triangle ABC$



SAS

6. Use AAS to prove the triangles congruent.
Given: $\angle R$ and $\angle P$ are right angles.
 $\overline{QR} \parallel \overline{SP}$
Prove: $\triangle QPS \cong \triangle SRQ$



AAS

1.) S

1. $\overline{AD} \parallel \overline{BC}$
2. $\overline{AD} \cong \overline{CB}$
3. $\angle AED \cong \angle CEB$
4. $\angle DAE \cong \angle BCE$
5. $\triangle AED \cong \triangle CEB$

- R
- Given
- Given
- vertical $\angle$ s
- alt int $\angle$ s
- AAS

2.) S

1. $\overline{KM} \perp \overline{JL}$
2. $\angle JKM \cong \angle LKM$
3. $\angle JMK \cong \angle LMK$
4. $\angle JMK \cong \angle LMK$
5. $\overline{JM} \cong \overline{LM}$
6. $\triangle JKM \cong \triangle LKM$

- R
- Given
- def of $\perp$
- all rt $\angle$ s are $\cong$
- Given
- Given
- AAS

3.) S

1. $\overline{AB} \cong \overline{DE}$
2. $\angle A \cong \angle D$
3. $\angle C \cong \angle F$
4. $\triangle ABC \cong \triangle DEF$

- R
- Given
- Given / all rt $\angle$ s $\cong$
- Given
- AAS

4.) S

1. $\overline{JK} \cong \overline{ML}$
2. $\angle JKL \cong \angle MLK$
3. $\overline{KL} \cong \overline{KL}$
4. $\triangle JKL \cong \triangle MLK$

- R
- Given
- Given
- Reflex
- SAS