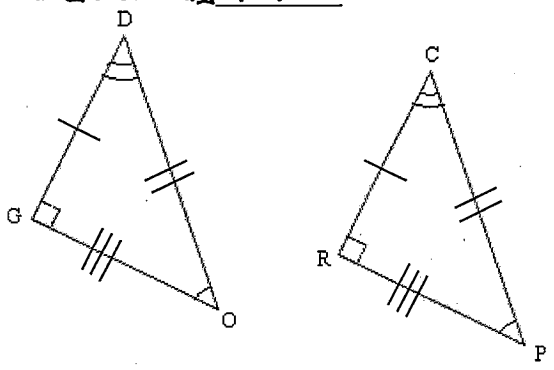


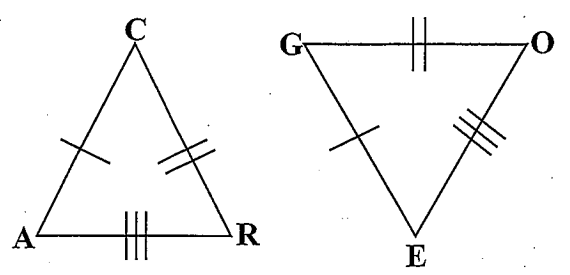
Triangle Congruence

I. Name the congruent triangles.

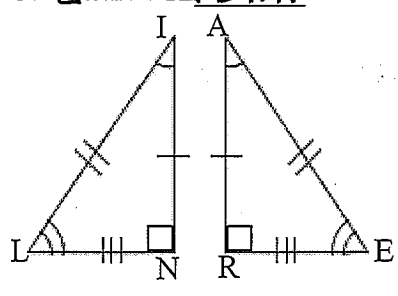
1. $\triangle OGD \cong \triangle PRC$



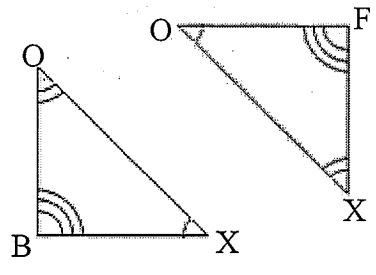
2. $\triangle RAC \cong \triangle OEG$



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

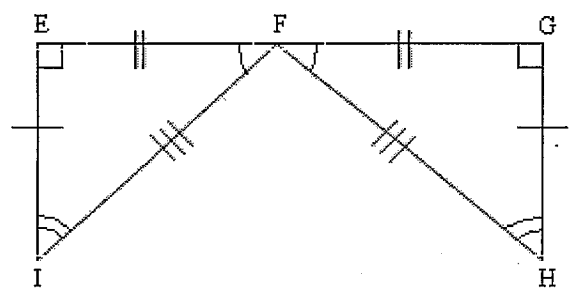


4. $\triangle FOX \cong \triangle BXO$



II. Name the congruent triangle and the congruent parts..

7.



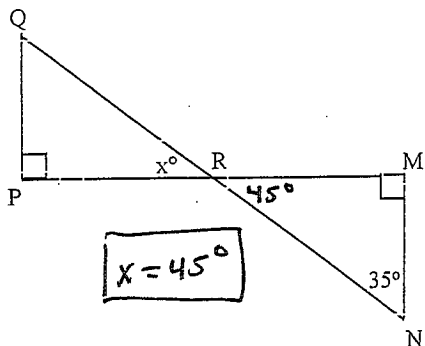
$\triangle FGH \cong \triangle FEI$

- $\angle EFI \cong \angle GFH$
- $\angle G \cong \angle E$
- $\angle H \cong \angle I$
- $\overline{FG} \cong \overline{FE}$
- $\overline{GH} \cong \overline{EI}$
- $\overline{FH} \cong \overline{FI}$

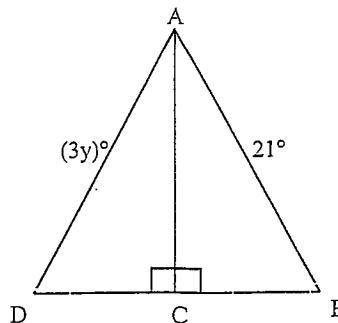
Use the congruency statement to fill in the corresponding congruent parts.

8. $\triangle EFI \cong \triangle HGI$ $\angle E \cong \angle H$ $\overline{FE} \cong \overline{GH}$ $\angle EFI \cong \angle HGI$
 $\overline{FI} \cong \overline{GI}$ $\angle FIE \cong \angle GIH$ $\overline{IE} \cong \overline{IH}$

9. $\triangle PQR \cong \triangle MNR$. Find x .



10. $\triangle ABC \cong \triangle ADC$. Find y .



$$3y = 21$$

$$y = 7$$

Third Angles Theorem (add to Theorems, Postulates and Definitions Card) –

If 2 angles of a triangle are \cong , then the 3 angle of the triangle will also be \cong .

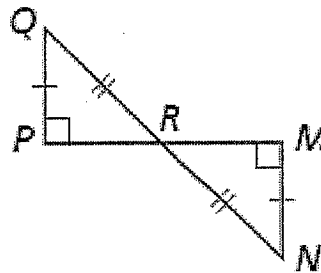
Proving Triangles Congruent

Given: $\angle P$ and $\angle M$ are right angles.

R is the midpoint of \overline{PM} .

$\overline{PQ} \cong \overline{MN}$, $\overline{QR} \cong \overline{NR}$

Prove: $\triangle PQR \cong \triangle MNR$

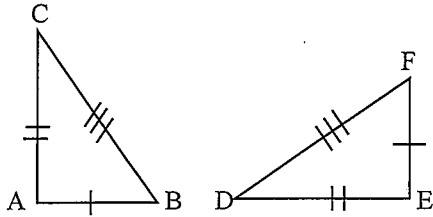


- | | |
|---|-------|
| ① $\angle P$ and $\angle M$ Right \angle 's | Given |
| ② $\overline{PQ} \cong \overline{MN}$ | Given |
| ③ $\overline{QR} \cong \overline{NR}$ | Given |
| ④ $\triangle PQR \cong \triangle MNR$ | HL |

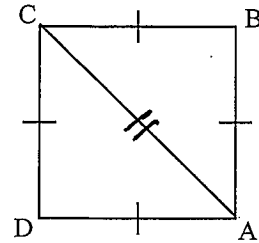
Triangle Congruence Worksheet #1

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

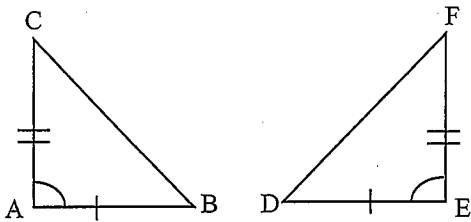
12. $\triangle ABC \cong \triangle EFD$ SSS



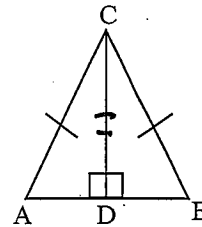
13. $\triangle ABC \cong \triangle CDA$ SSS



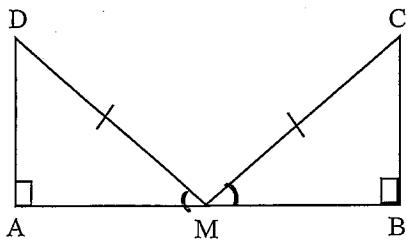
14. $\triangle ABC \cong \triangle EFD$ SAS



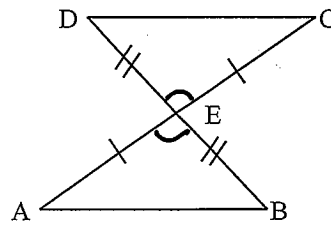
15. $\triangle ADC \cong \triangle BDC$ HL



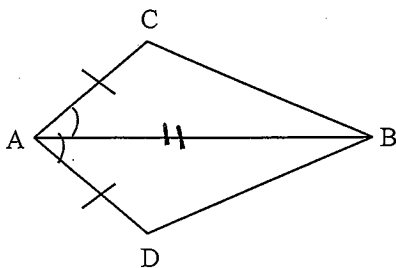
21. $\triangle MAD \cong \triangle MBC$ AA



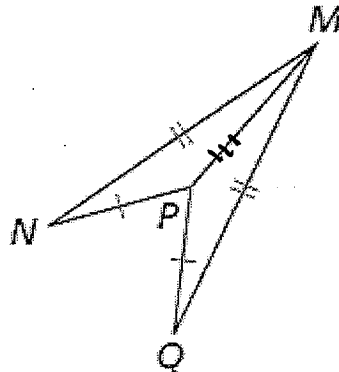
$\triangle ABE \cong \triangle CDE$ SAS



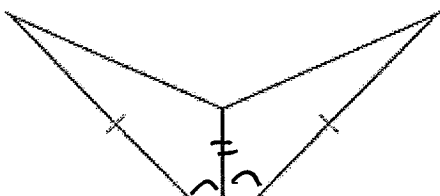
23. $\triangle ACB \cong \triangle ADB$ SAS



23. $\triangle MNP \cong \triangle MQP$ SSS



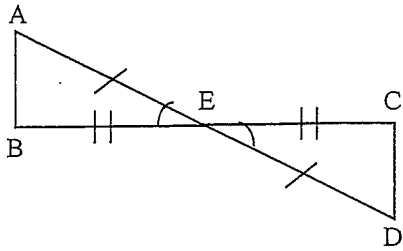
23. SAS



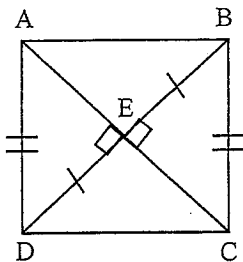
Triangle Congruence Worksheet #2

I. For each pair of triangles, tell which postulate, if any, can be used to prove the triangles congruent.

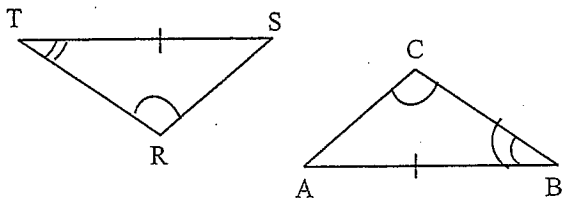
1. $\triangle AEB \cong \triangle DEC$ SAS



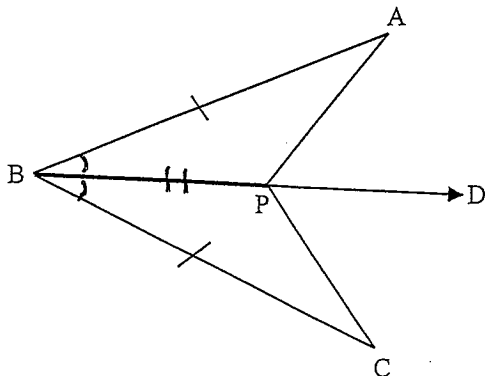
3. $\triangle DEA \cong \triangle BEC$ HL



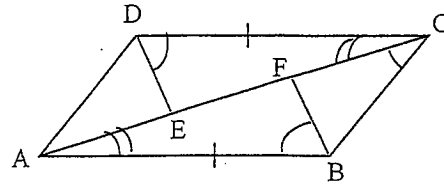
5. $\triangle RTS \cong \triangle CBA$ AAS



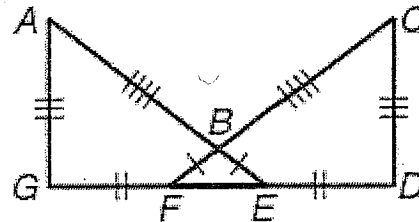
7. $\triangle BAP \cong \triangle BCP$
Given: \overrightarrow{BD} bisects $\angle ABC$ SAS



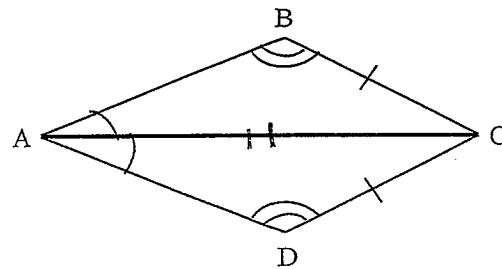
2. $\triangle CDE \cong \triangle ABF$ ASA



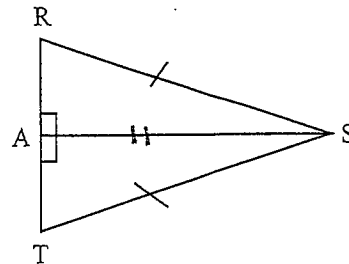
4. $\triangle AGE \cong \triangle CDF$ SSS



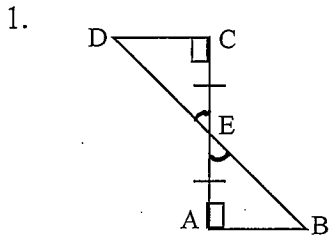
6. $\triangle ABC \cong \triangle ADC$ AAS



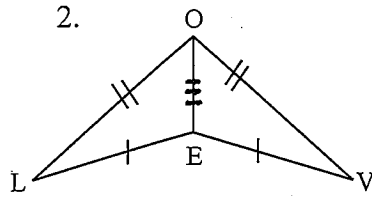
8. $\triangle SAT \cong \triangle SAR$ HL



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

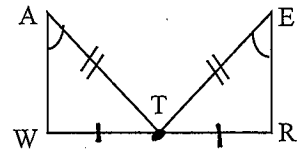


- a. yes
 b. $\triangle DCE \cong \triangle BAC$
 c. ASA

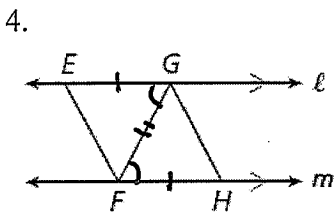


- a. yes
 b. $\triangle LOE \cong \triangle VOE$
 c. SSS

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

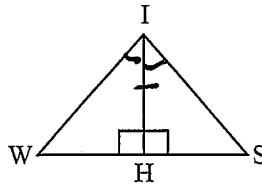


- a. NO
 b. $\triangle ___ \cong \triangle ___$
 c.

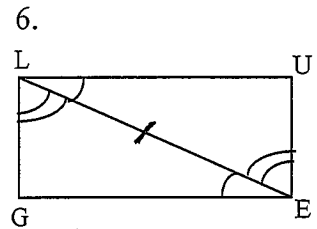


- a. yes
 b. $\triangle EGF \cong \triangle HFG$
 c. SAS

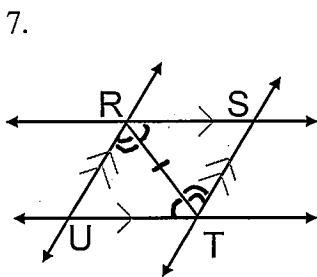
5. Given: \overrightarrow{IH} Bisects $\angle WIS$



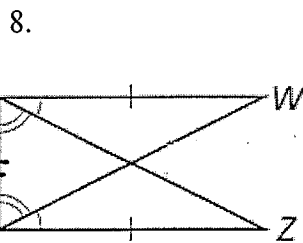
- a. yes
 b. $\triangle WIH \cong \triangle SIH$
 c. ASA



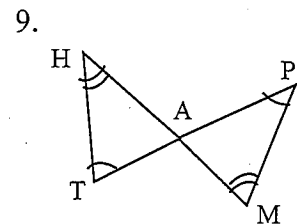
- a. yes
 b. $\triangle ULE \cong \triangle GEL$
 c. ASA



- a. yes
 b. $\triangle URT \cong \triangle STR$
 c. ASA

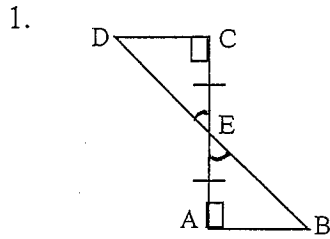


- a. yes
 b. $\triangle WVY \cong \triangle ZYV$
 c. SAS

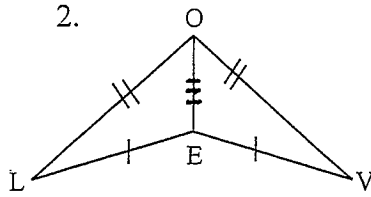


- a. NO
 b. $\triangle ___ \cong \triangle ___$
 c.

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

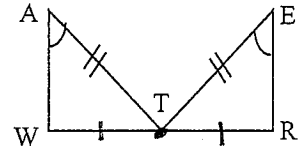


- a. yes
 b. $\triangle DCE \cong \triangle BAC$
 c. ASA

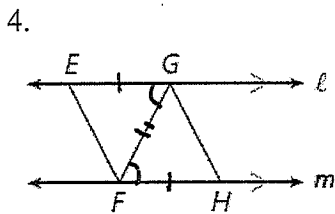


- a. yes
 b. $\triangle LOE \cong \triangle VOE$
 c. SSS

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

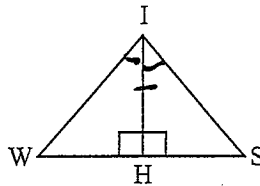


- a. NO
 b. $\triangle ___ \cong \triangle ___$
 c.

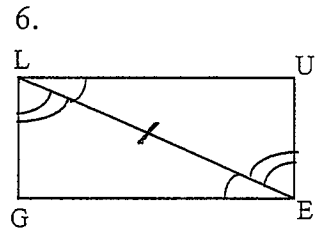


- a. yes
 b. $\triangle EGF \cong \triangle HFG$
 c. SAS

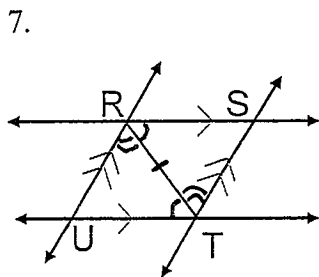
5. Given: \overrightarrow{IH} Bisects $\angle WIS$



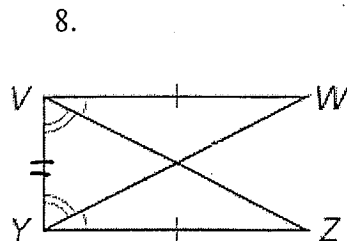
- a. yes
 b. $\triangle WIH \cong \triangle SIH$
 c. ASA



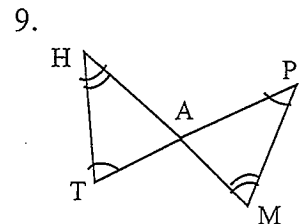
- a. yes
 b. $\triangle GLE \cong \triangle GEL$
 c. ASA



- a. yes
 b. $\triangle URT \cong \triangle STR$
 c. ASA



- a. yes
 b. $\triangle WVY \cong \triangle ZYV$
 c. SAS

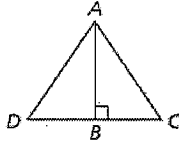
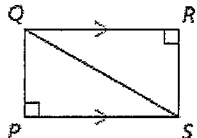


- a. NO
 b. $\triangle ___ \cong \triangle ___$
 c.

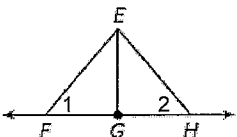
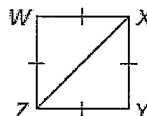
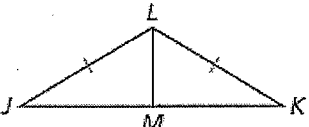
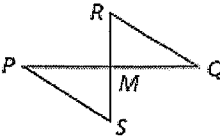
Triangle Proofs Worksheet

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

I. Proving Triangles Congruent

<p>1. Use AAS to prove the triangles congruent. Given: $\overline{AD} \parallel \overline{BC}$, $\overline{AD} \cong \overline{CB}$ Prove: $\triangle AED \cong \triangle CEB$</p>	<p>5. Given: B is the midpoint of \overline{DC}. $\overline{AB} \perp \overline{DC}$ Prove: $\triangle ABD \cong \triangle ABC$</p>
<p>2. Given: $\overline{KM} \perp \overline{JL}$, $\overline{JM} \cong \overline{LM}$, $\angle JMK \cong \angle LMK$ Prove: $\triangle JKM \cong \triangle LKM$</p>	
<p>3. Given: $\overline{AB} \cong \overline{DE}$, $\angle C \cong \angle F$ Prove: $\triangle ABC \cong \triangle DEF$</p>	<p>6. Use AAS to prove the triangles congruent. Given: $\angle R$ and $\angle P$ are right angles. $\overline{QR} \parallel \overline{SP}$ Prove: $\triangle QPS \cong \triangle SRQ$</p>
<p>4. Given: $\overline{JK} \cong \overline{ML}$, $\angle JKL \cong \angle MLK$ Prove: $\triangle JKL \cong \triangle MLK$</p>	

II. Using CPCTC

<p>7. Given: G is the midpoint of \overline{FH}. $\overline{EF} \cong \overline{EH}$ Prove: $\angle 1 \cong \angle 2$</p> 	<p>10. Given: $\overline{WX} \cong \overline{XY} \cong \overline{YZ} \cong \overline{ZW}$ Prove: $\angle W \cong \angle Y$</p> 
<p>8. Given: \overline{LM} bisects $\angle JLK$. $\overline{JL} \cong \overline{KL}$ Prove: M is the midpoint of \overline{JK}.</p> 	<p>11. Given: M is the midpoint of \overline{PQ} and \overline{RS}. Prove: $\overline{QR} \cong \overline{PS}$</p> 
<p>9. Given: $\overline{AC} \cong \overline{AD}$, $\overline{CB} \cong \overline{DB}$ Prove: \overline{AB} bisects $\angle CAD$.</p> 