Review for Triangle Proofs Quiz

In 1 – 9, each figure shows two triangles and congruent parts have been marked. Identify the postulate (SSS, SAS, ASA, AAS or HL) that can be used to prove that the triangles are congruent, or write "can't be done".
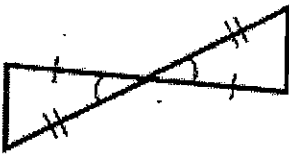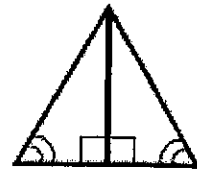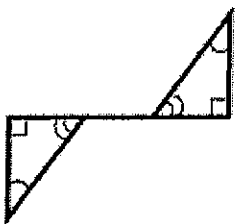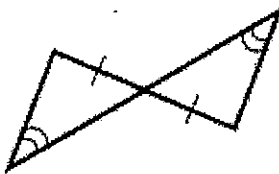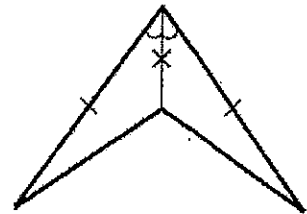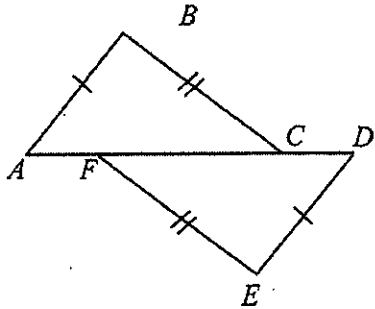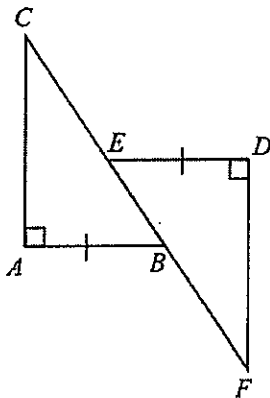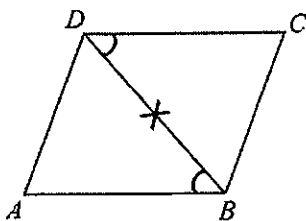
1.

2.

3.

4.

5.

6.

7.

8.

9.

10. Name the sides that would have to be congruent to use the SSS congruence postulate.

11. Name the sides that would have to be congruent to use the SAS congruence postulate.

12. Name the angles that would have to be congruent to use the ASA congruence postulate.
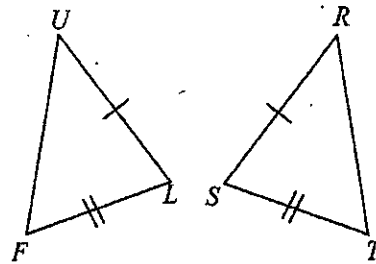

13. Name the angles that would have to be congruent to use the SAS congruence postulate.

14. Name the angles that would have to be congruent to use the AAS congruence postulate.

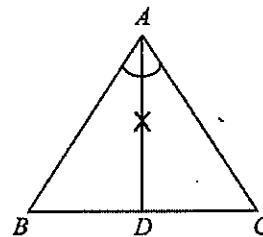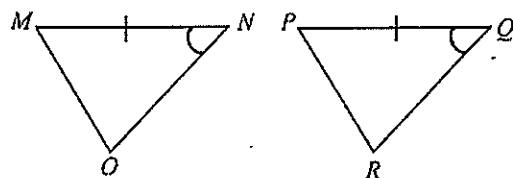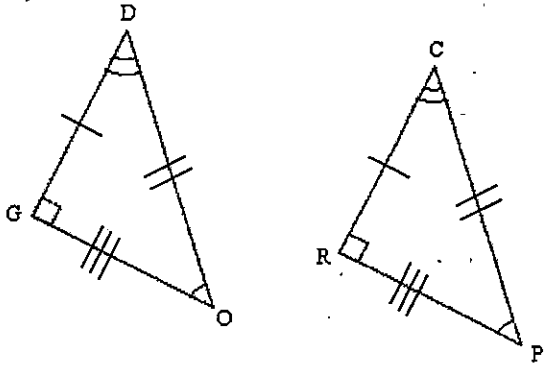**15.** Name the sides that would have to be congruent to use the SAS congruence postulate.
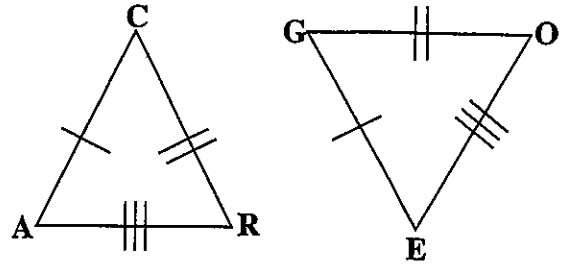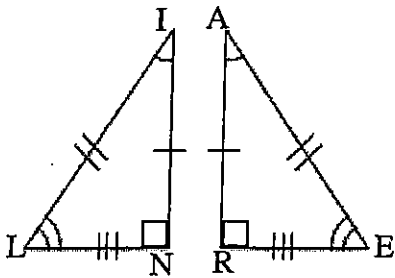
Name the congruent triangles.

16. △OGD ≅ △_____

17. △RAC ≅ △_____

18. △LIN ≅ △_____

19. △FOX ≅ △_____
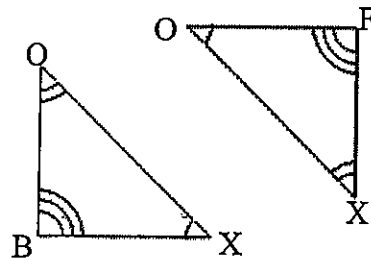
II. Name the congruent triangle and the congruent parts..

20.
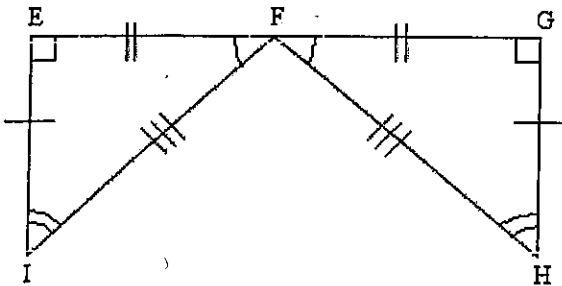
△FGH ≅ △_____

∠EFI ≅ ∠_____ $\overline{FG}$ ≅ ____

∠G ≅ ∠_____ $\overline{GH}$ ≅ ____

∠H ≅ ∠_____ $\overline{FH}$ ≅ ____

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

21. △EFI ≅ △HGI   ∠E ≅ ∠_____ $\overline{FE}$ ≅ _____   ∠EFI ≅ ∠_____

$\overline{FI}$ ≅ ____   ∠FIE ≅ ∠_____ $\overline{IE}$ ≅ ____

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

Q

P ⌐ x° R   M ⌐
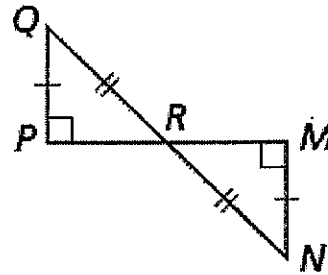
35°

N

23. $\triangle ABC \cong \triangle ADC$. Find y.
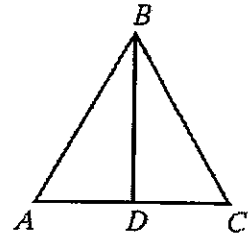
A

(3y)°   21°

D   C   B
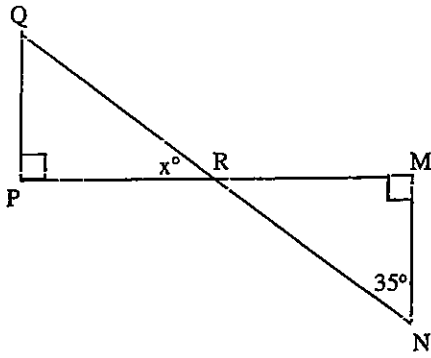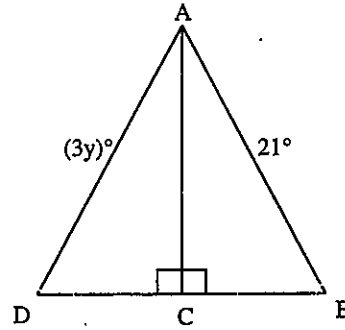
Proving Triangles Congruent

24. Given: $\angle P$ and $\angle M$ are right angles.
R is the midpoint of $\overline{PM}$.
$\overline{PQ} \cong \overline{MN}, \overline{QR} \cong \overline{NR}$
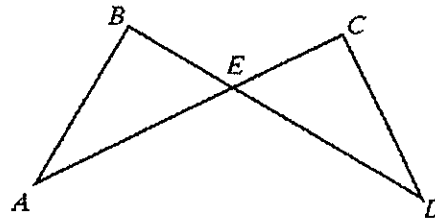Prove: $\triangle PQR \cong \triangle MNR$

Q

P ⌐   R   M ⌐

N

25. *Given:* $\triangle ABC$ is isosceles with vertex B. D is the midpoint of $\overline{AC}$.

Prove: $\triangle ABD \cong \triangle CBD$

Statements	Reasons

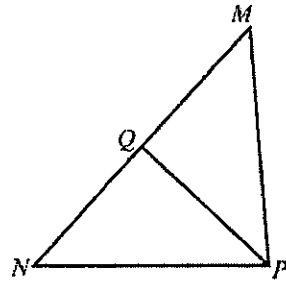**26.** *Given:* $\overline{DB} \perp \overline{AB}, \overline{AC} \perp \overline{DC}, \overline{BE} \cong \overline{CE}$
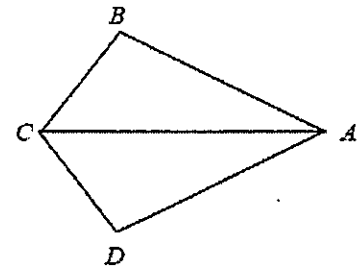
Prove: $\triangle ABE \cong \triangle DCE$

Statements	Reasons

27. *Given:* $\overline{PQ}$ bisects $\overline{MN}$, $\overline{PQ} \perp \overline{MN}$
    Prove: $\triangle MPQ \cong \triangle NPQ$

Statements	Reasons

28. *Given:* $\overline{AC}$ bisects $\angle BCD$, $\angle B \cong \angle D$
    Prove: $\triangle ABC \cong \triangle ADC$

Statements	Reasons