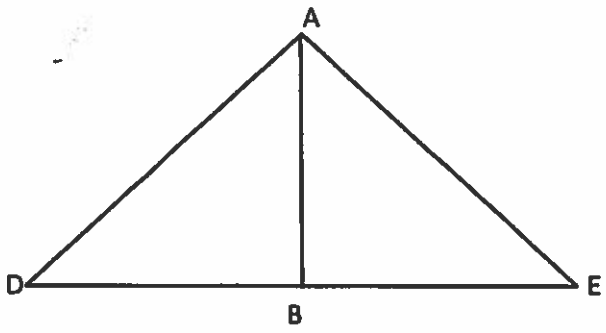
Name: _____ Date: _____

Triangle Proofs Notes (Perpendicular)

Perpendicular: _____.

Given: AB ⊥ DE

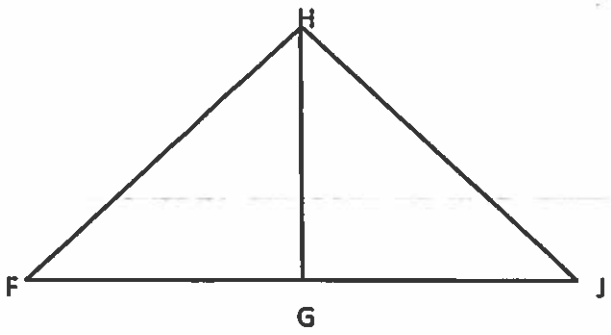


Statement	Reason

Right Angles: _____.

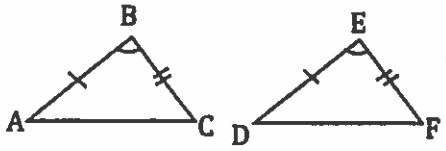
Perpendicular Bisector: _____.

Given: HG is the perpendicular bisector of FJ.



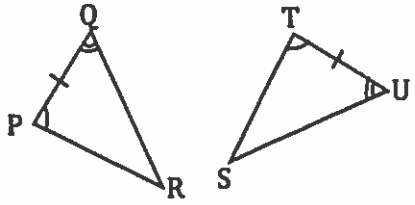
Statement	Reason

19. Given: $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, and $\angle B \cong \angle E$



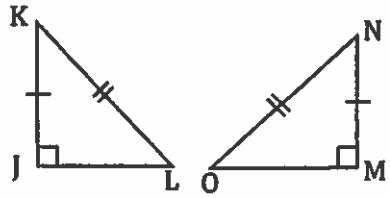
Prove: $\triangle ABC \cong \triangle DEF$

20. Given: $\overline{PQ} \cong \overline{TU}$, $\angle P \cong \angle T$, and $\angle Q \cong \angle U$



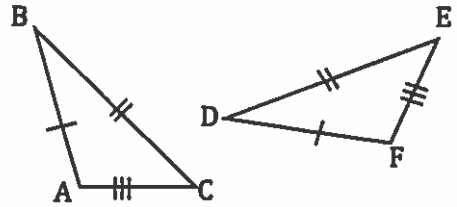
Prove: $\triangle PQR \cong \triangle TUS$

21. Given: $JK \cong MN$, $KL \cong NO$



Prove: $\triangle JKL \cong \triangle MNO$

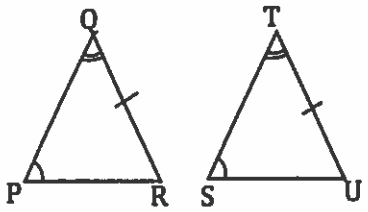
22. Given: $\overline{AB} \cong \overline{DF}$, $\overline{BC} \cong \overline{DE}$, and $\overline{AC} \cong \overline{EF}$



Prove: $\triangle ABD \cong \triangle FDE$

23.

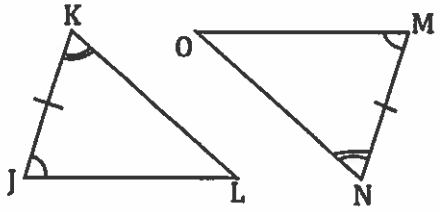
Given: $\angle P \cong \angle S$, $\angle Q \cong \angle T$, and $\overline{QR} \cong \overline{TU}$



Prove: $\triangle PQR \cong \triangle STU$

24.

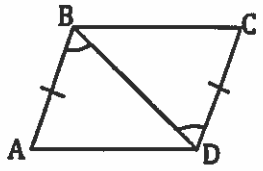
Given: $\angle J \cong \angle M$, $\overline{JK} \cong \overline{MN}$ and $\angle K \cong \angle N$



Prove: $\triangle JKL \cong \triangle MNO$

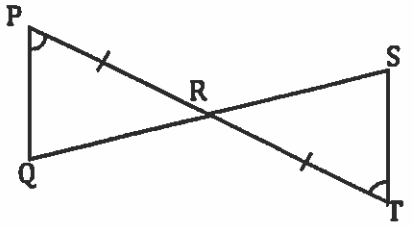
Name: _____ Date: _____

25. Given: $\overline{AB} \cong \overline{CD}$, $\angle ABD \cong \angle CDB$



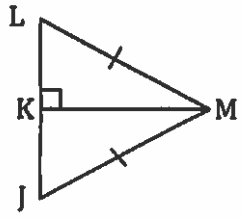
Prove: $\triangle ABD \cong \triangle CDB$

26. Given: $\overline{PR} \cong \overline{TR}$, $\angle P \cong \angle T$



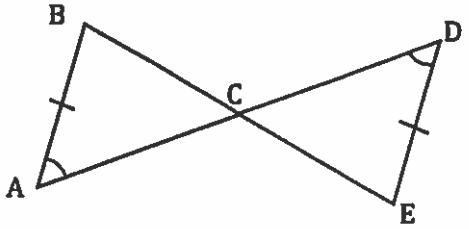
Prove: $\triangle ABC \cong \triangle DBC$

27. Given: $\overline{LM} \cong \overline{JM}$



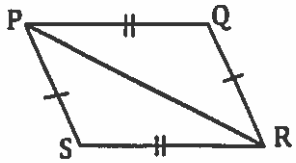
Prove: $\triangle LKM \cong \triangle JKM$

28. Given: $\overline{AB} \cong \overline{ED}$, $\angle A \cong \angle D$



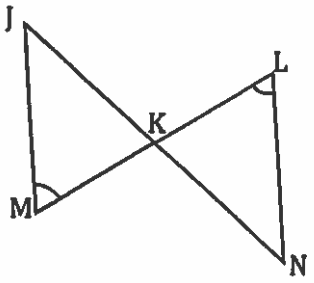
Prove: $\triangle ABC \cong \triangle DCE$

29. Given: $\overline{PS} \cong \overline{QR}$, $\overline{PQ} \cong \overline{SR}$



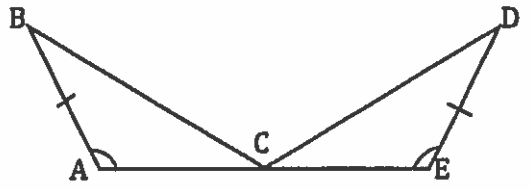
Prove: $\triangle PRS \cong \triangle RPQ$

30. Given: $\overline{JN}$ Bisects $\overline{ML}$, $\angle M \cong \angle L$



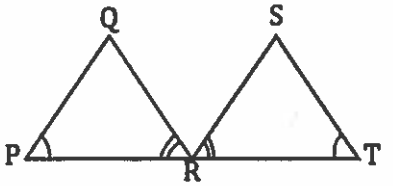
Prove: $\triangle MJK \cong \triangle LNK$

31. Given: C is the midpoint of $\overline{AE}$, $\overline{BA} \cong \overline{DE}$, and $\angle A \cong \angle E$



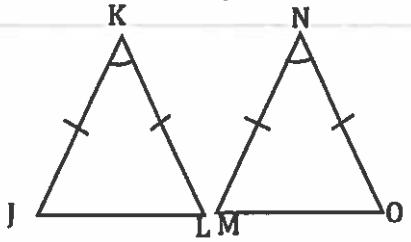
Prove: $\triangle ABC \cong \triangle EDC$

32. Given: R is the midpoint of $\overline{PT}$, $\angle P \cong \angle T$, and $\angle PRQ \cong \angle TRS$



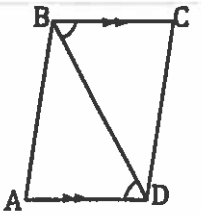
Prove: $\triangle PQR \cong \triangle TSR$

33. Given: $\angle K \cong \angle N$, $\overline{JK} \cong \overline{MN}$, $\overline{KL} \cong \overline{NO}$



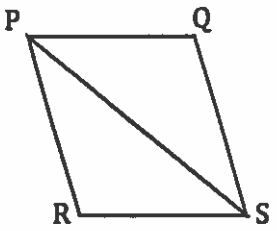
Prove: $\triangle JKL \cong \triangle MNO$

34. Given: $\overline{BA} \| \overline{CD}$ $\angle ADB \cong \angle CBD$



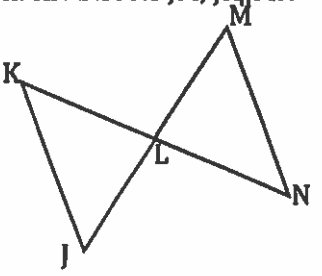
Prove: $\triangle ABD \cong \triangle CDB$

35. Given: PQRS is a parallelogram



Prove: $\triangle RPS \cong \triangle QSP$

36. Given: $\overline{KN}$ bisects $\overline{JM}$, $\overline{JK} \| \overline{MN}$



Prove: $\triangle JKL \cong \triangle MNL$

Proof Poster Activity

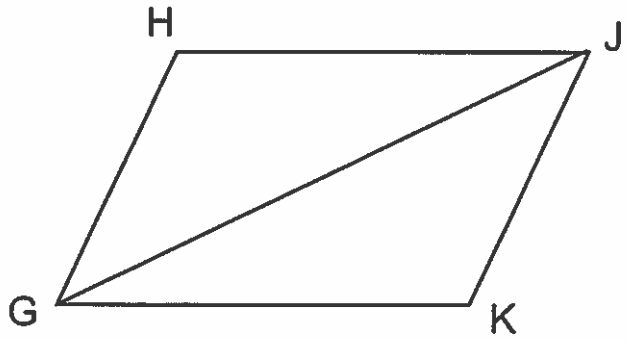
You will make a poster of a proof on 11x14 paper. On the poster, you should include...

- the diagram
- the given information
- what you are trying to prove
- a 2-column proof with statements and reasons that show why the triangles are congruent

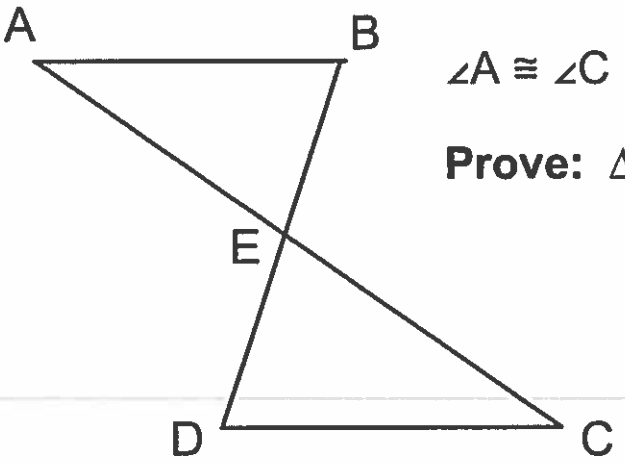
Feel free to be creative and add color! However, the most important thing is that your proof is complete and correct!

Given: $\overline{HJ} \parallel \overline{GK}$; $\overline{HJ} \cong \overline{GK}$ #1

Prove: $\Delta GHJ \cong \Delta JKG$



#2



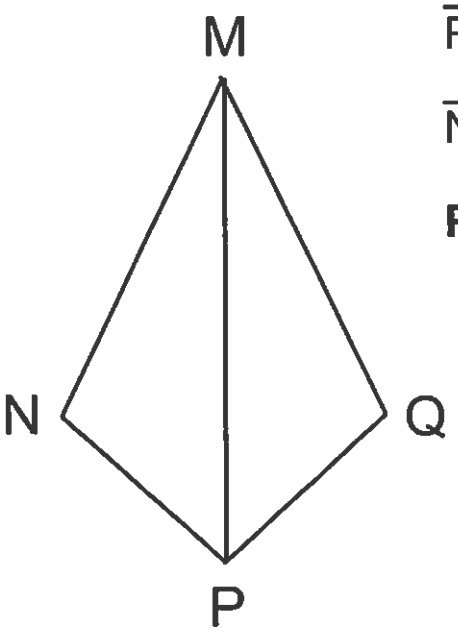
Given:

E is the midpoint of $\overline{BD}$;

$\angle A \cong \angle C$

Prove: $\Delta ABE \cong \Delta CDE$

#3



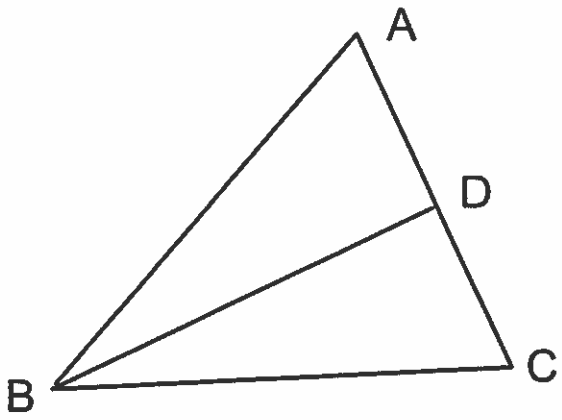
Given:

$\overline{PM}$ bisects $\angle NPQ$;

$\overline{NP} \cong \overline{QP}$

Prove: $\Delta MPN \cong \Delta MPQ$

#4

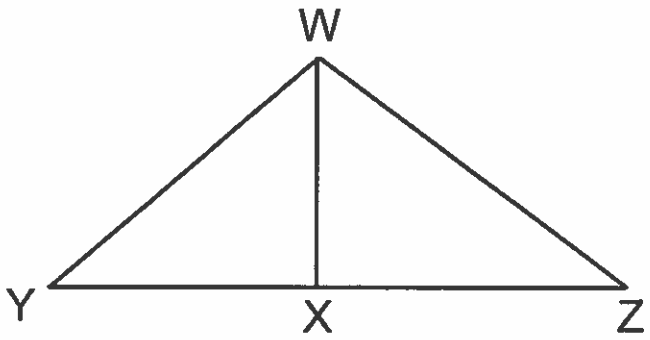


Given: $\overline{AB} \cong \overline{CB}$;

D is the midpoint of $\overline{AC}$

Prove: $\Delta ABD \cong \Delta CBD$

#5

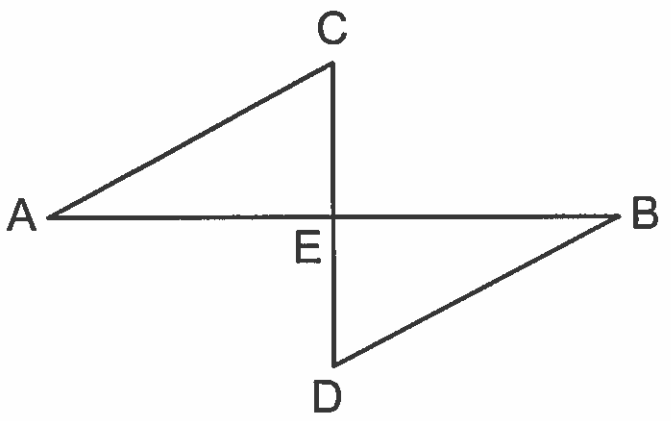


Given: $\overline{WX} \perp \overline{YZ}$;

$\overline{WY} \cong \overline{WZ}$

Prove: $\Delta WXY \cong \Delta WXZ$

#6



Given: $\overline{AB}$ is the perpendicular bisector of $\overline{CD}$;

$\angle C \cong \angle D$

Prove: $\Delta ACE \cong \Delta BDE$