

Complete.

- 1) If $m\angle 2 = 85$, then $m\angle 6 =$ _____ and $m\angle 7 =$ _____
- 2) If $m\angle 8 = 83$, then $m\angle 16 =$ _____ and $m\angle 10 =$ _____
- 3) If $m\angle 9 = 105$, then $m\angle 10 =$ _____ and $m\angle 16 =$ _____
- 4) If $m\angle 15 = 96$, then $m\angle 8 =$ _____ and $m\angle 1 =$ _____

Identify each pair of angles in exercises 5-8 as vertical, corresponding, alternate interior, or same-side interior.

- 5) $\angle 14$ and $\angle 8$
- 6) $\angle 9$ and $\angle 13$
- 7) $\angle 11$ and $\angle 16$
- 8) $\angle 1$ and $\angle 3$

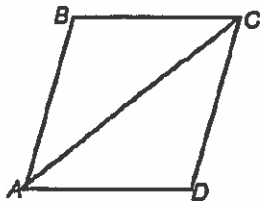
- 9) If two parallel lines are cut by a transversal, then corresponding angles are _____.
- 10) If two parallel lines are cut by a transversal, then alternate interior angles are _____.
- 11) If two parallel lines are cut by a transversal, then same-side interior angles are _____.

Name: _____

Date: _____

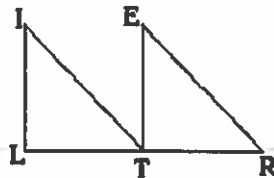
Given: $\overline{BC} \cong \overline{DA}$
 \overline{AC} bisects $\angle BCD$

Prove: $\triangle ABC \cong \triangle CDA$



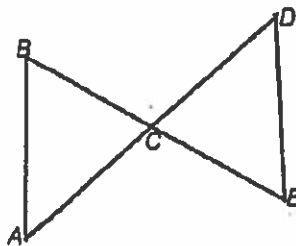
Given: $\overline{LT} \cong \overline{TR}$, $\angle ILT \cong \angle ETR$, $IT \parallel ER$

Prove: $\triangle LIT \cong \triangle TER$

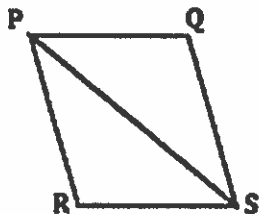


Given: $\overline{BA} \cong \overline{ED}$
 C is the midpoint of \overline{BE} and \overline{AD}

Prove: $\triangle ABC \cong \triangle DEC$



Given: PQRS is a parallelogram

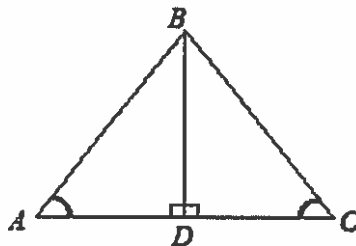


Prove: $\triangle RPS \cong \triangle QSP$

Given: $\angle ADB$ and $\angle CDB$ are right angles

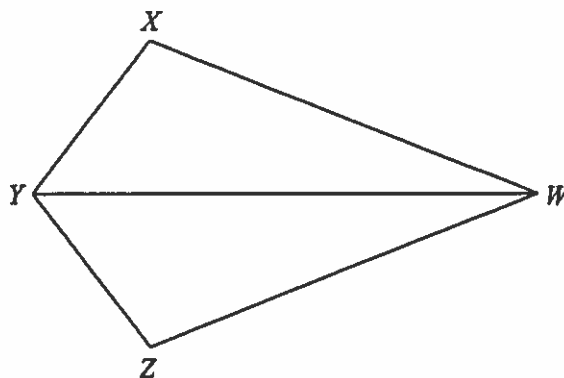
$\angle A \cong \angle C$

Prove: $\triangle ADB \cong \triangle CDB$

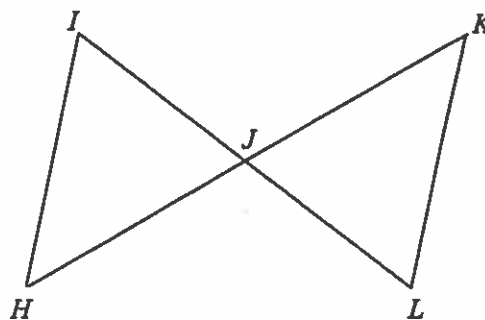


Write a two Column Proof.

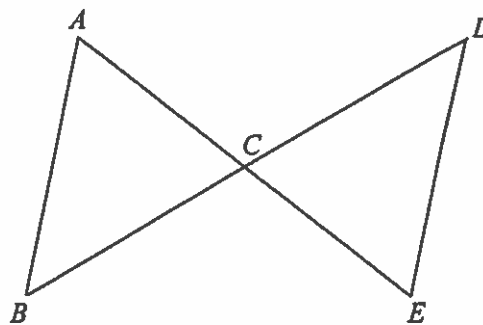
- 1) Given: $\overline{YX} \cong \overline{YZ}$, $\angle XYW \cong \angle ZYW$
 Prove: $(\overline{XW} \cong \overline{ZW})$ After $\triangle WXY \cong \triangle WYZ$



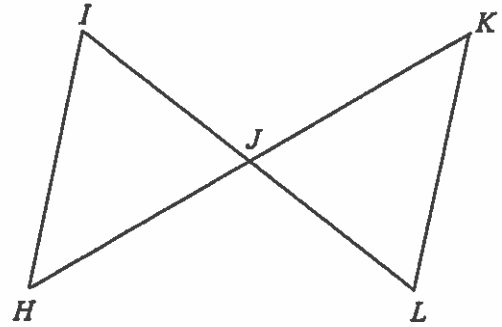
- 2) Given: $\overline{IJ} \cong \overline{LJ}$ and $\overline{HJ} \cong \overline{KJ}$
 Prove: $(\overline{IH} \cong \overline{LK})$ After $\triangle IJH \cong \triangle LJK$



- 3) Given: $\overline{AC} \cong \overline{EC}$ and $\overline{BC} \cong \overline{DC}$
 Prove: $(\angle A \cong \angle E)$ After $\triangle ACB \cong \triangle ECD$



- 4) Given: $\angle H \cong \angle K$ and $\overline{HJ} \cong \overline{KJ}$
 Prove: $(\overline{IJ} \cong \overline{LJ})$ After $\triangle IJH \cong \triangle LJK$



- 5) Given: $\angle A \cong \angle C$; \overline{BD} bisects $\angle ABC$
 Prove: $(\overline{AB} \cong \overline{CB})$ After $\triangle BDA \cong \triangle BDC$

