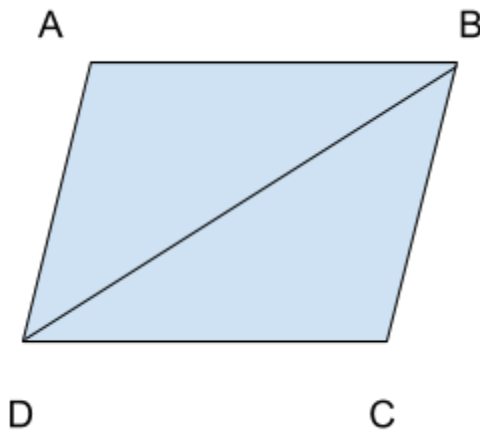


Corresponding Parts of Congruent Triangles are Congruent (CPCTC--Math XL uses CPOCTAC)

- Once you prove triangles are congruent by SSS, SAS, ASA or AAS you then can prove the other corresponding parts of the congruent triangles are congruent, too.

Example 1:

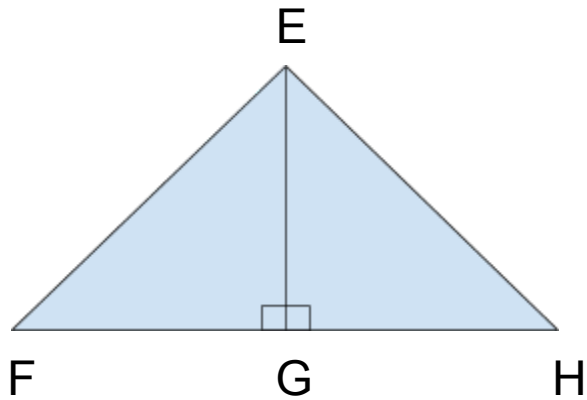


Given: $\angle ADB \cong \angle CBD$, $\angle A \cong \angle C$

Prove: $\overline{AB} \cong \overline{CD}$

1. $\angle ADB \cong \angle CBD$, $\angle A \cong \angle C$	1. Given
2. $\overline{BD} \cong \overline{BD}$	2. Reflexive prop
3. $\triangle BAD \cong \triangle DCB$	3. AAS
4. $\overline{AB} \cong \overline{CD}$	4. CPCTC

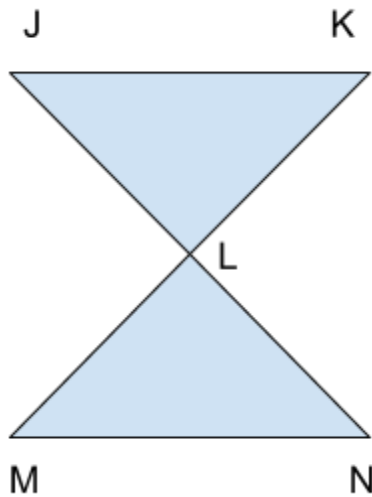
Example 2:



Given: $\angle EGF$ and $\angle EGH$ are right angles, $\overline{GE}$ bisects $\angle FEH$

Prove: $\angle F \cong \angle H$

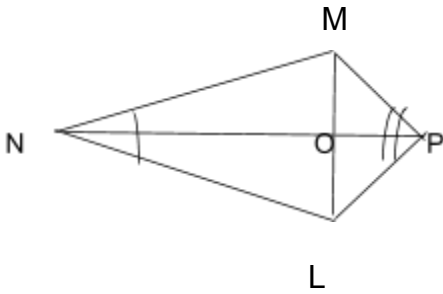
1. $\angle EGF$ and $\angle EGH$ are right angles	1. Given
2. $\angle EGF \cong \angle EGH$	2. All right angles are congruent
3. $\overline{GE} \cong \overline{GE}$	3. Reflexive prop
4. $\overline{GE}$ bisects $\angle FEH$	4. Given
5. $\angle FEH \cong \angle HEG$	5. Def of bisect
6. $\triangle FEH \cong \triangle HEG$	6. ASA
7. $\angle F \cong \angle H$	7. CPCTC



Given : $\overline{JK} \parallel \overline{MN}$; $\overline{JK} \approx \overline{MN}$

Prove: $\overline{LK} \approx \overline{LM}$

1. $\overline{JK} \parallel \overline{MN}$	1. Given
2. $\angle KJL \approx \angle MNL$ $\angle JKL \approx \angle NML$	2. Alt int angles theorem
3. $\overline{JK} \approx \overline{MN}$	3. given
4. $\triangle LKJ \approx \triangle LMN$	4. ASA
5. $\overline{LK} \approx \overline{LM}$	5. CPCTC



Given: $\angle MNO \cong \angle LNO$, $\angle LPO \cong \angle MPO$

Prove: $\triangle NOL \cong \triangle NOM$

1. $\angle MNO \cong \angle LNO$, $\angle LPO \cong \angle MPO$	1. Given
2. $\overline{NP} \cong \overline{NP}$	2. reflexive
3. $\triangle NMP \cong \triangle NLP$	3. ASA
4. $\overline{NM} \cong \overline{NL}$	4. CPCTC
5. $\overline{NO} \cong \overline{NO}$	5. reflexive
6. $\triangle NOL \cong \triangle NOM$	6. SAS