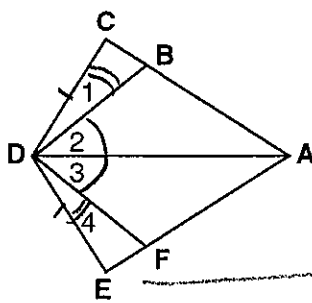


Name: KEY  
 CC Geometry Honors

Proofs Practice

1)



Given:  $\overline{DA}$  bisects  $\angle BDF$   
 $\angle 1 \cong \angle 4$   
 $\overline{CD} \cong \overline{DE}$

Prove:  $\triangle CDA \cong \triangle EDA$

- 1)  $\overline{DA}$  bisects  $\angle BDF$   
 $\angle 1 \cong \angle 4, \overline{CD} \cong \overline{DE}$
- 2)  $\angle 2 \cong \angle 3$
- 3)  $\angle 1 + \angle 2 \cong \angle 3 + \angle 4$
- 4)  $\angle CDA \cong \angle EDA$
- 5)  $\overline{AD} \cong \overline{AD}$
- 6)  $\triangle CDA \cong \triangle EDA$

1) Given

2)  $\angle$  bisector creates  $\angle$ 's

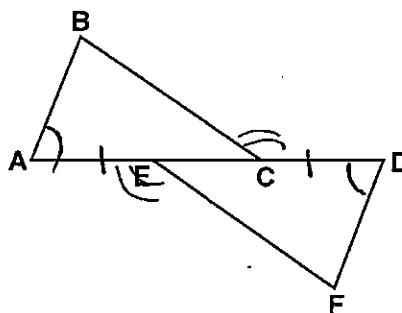
3) Addition Prop

4) Partition Postulate

5) Reflexive prop.

6) SAS

2)



Given:  $\angle A \cong \angle D$   
 $\overline{AE} \cong \overline{CD}$   
 $\angle AEF \cong \angle BCD$

Prove:  $\triangle ABC \cong \triangle DFE$

- 1)  $\angle A \cong \angle D, \overline{AE} \cong \overline{CD},$   
 $\angle AEF \cong \angle BCD$
- 2)  $\overline{EC} \cong \overline{EC}$
- 3)  $\overline{AE} + \overline{EC} \cong \overline{EC} + \overline{CD}$
- 4)  $\overline{AC} \cong \overline{ED}$
- 5)  $\angle BCA \cong \angle FED$
- 6)  $\triangle ABC \cong \triangle DFE$

1) Given

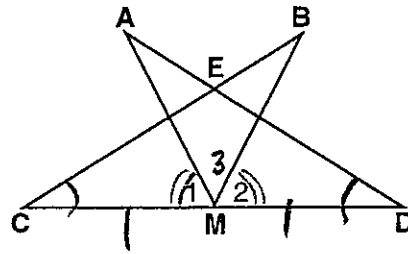
3) Addition Property

4) Partition Postulate

5) Supp of  $\cong$   $\angle$ 's are  $\cong$

6) ASA

3)

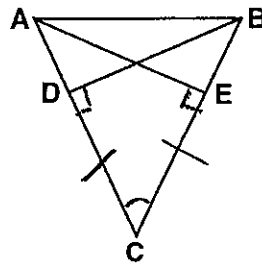


Given:  $\angle C \cong \angle D$   
 $\angle 1 \cong \angle 2$   
 M is the midpoint of  $\overline{DC}$

Prove:  $\overline{CB} \cong \overline{DA}$

S	R
1) $\angle C \cong \angle D$ , $\angle 1 \cong \angle 2$ , M is mdpt of $\overline{DC}$	1) Given
2) $\overline{CM} \cong \overline{DM}$	2) Mdpt create: 2 $\cong$ segments
3) $\angle 3 \cong \angle 3$	3) Reflexive
4) $\angle 1 + \angle 2 = \angle 2 + \angle 3$	4) Addition
5) $\angle CMB \cong \angle DMA$	5) Partitioning
6) $\triangle CMB \cong \triangle DMA$	6) ASA
7) $\overline{CB} \cong \overline{DA}$	7) CPCTC

4)

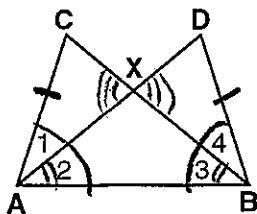


Given:  $\overline{CD} \cong \overline{CE}$   
 $\overline{AE} \perp \overline{BC}$   
 $\overline{BD} \perp \overline{AC}$

Prove:  $\overline{AE} \cong \overline{BD}$

S	R
1) $\overline{CD} \cong \overline{CE}$ $\overline{AE} \perp \overline{BC}$ , $\overline{BD} \perp \overline{AC}$	1) Given
2) $\angle BDC$ + $\angle AEC$ are right $\angle$ 's	2) $\perp$ lines form right $\angle$ 's
3) $\angle BDC \cong \angle AEC$	3) All right $\angle$ 's are $\cong$
4) $\angle C \cong \angle C$	4) Reflexive property
5) $\triangle BDC \cong \triangle AEC$	5) ASA
6) $\overline{AE} \cong \overline{BD}$	6) CPCTC

5)

Given:  $\overline{BC}$  and  $\overline{AD}$  intersect at  $X$ 

$$\overline{AC} \cong \overline{DB}$$

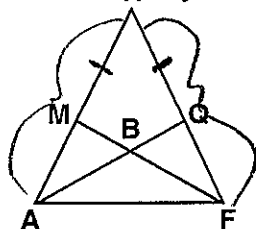
$$\angle CAB \cong \angle DBA$$

$$\angle 2 \cong \angle 3$$

Prove:  $\overline{CX} \cong \overline{XD}$ 

S	R
1) $\overline{AC} \cong \overline{DB}, \angle CAB \cong \angle DBA$ $\angle 2 \cong \angle 3$	1) Given
2) $\angle 1 + \angle 2 \cong \angle 3 + \angle 4$	2) Partition
3) $\angle 1 \cong \angle 4$	3) Subtraction
4) $\angle CXA \cong \angle DXB$	4) Vertical $\angle$ 's are $\cong$
5) $\triangle CXA \cong \triangle DXB$	5) AAS
6) $\overline{CX} \cong \overline{XD}$	6) CPCTC

6)

Given:  $\overline{HA} \cong \overline{HF}$   
 $\overline{HM} \cong \overline{HQ}$ Prove:  $\overline{FM} \cong \overline{AQ}$ 

S	R
1) $\overline{HA} \cong \overline{HF}, \overline{HM} \cong \overline{HQ}$	1) Given
2) $\angle H \cong \angle H$	2) Reflexive
3) $\triangle HMF \cong \triangle HQA$	3) SAS
4) $\overline{FM} \cong \overline{AQ}$	4) CPCTC