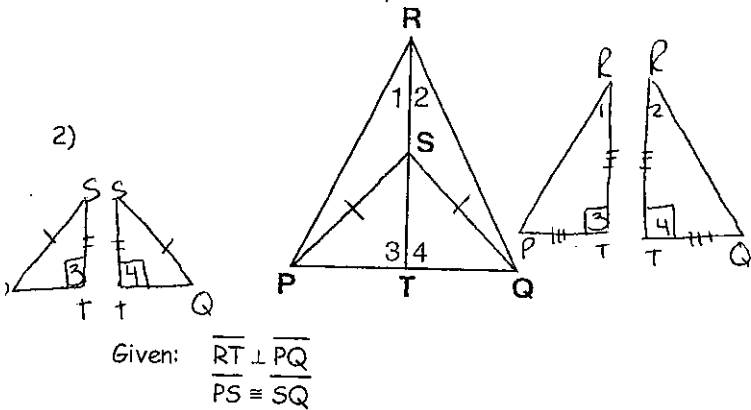


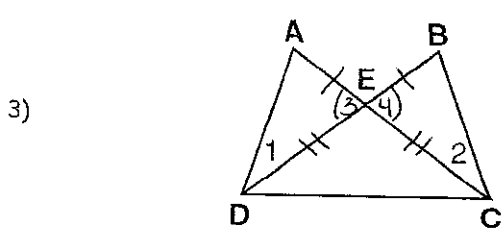
Prove: $\angle 1 \cong \angle 2$

S	R
1) Quad ABCD, $\overline{AB} \cong \overline{AD}$, $\overline{BC} \cong \overline{CD}$ 2) $\overline{AC} \cong \overline{AC}$ 3) $\triangle ABC \cong \triangle ADC$ 4) $\angle 3 \cong \angle 4$ 5) $\overline{AE} \cong \overline{AE}$ 6) $\triangle ABE \cong \triangle ADE$ 7) $\angle 1 \cong \angle 2$	1) Given 2) Reflexive 3) SSS \cong SSS 4) CPCTC 5) Reflexive 6) SAS \cong SAS 7) CPCTC



Prove: $\angle 1 \cong \angle 2$

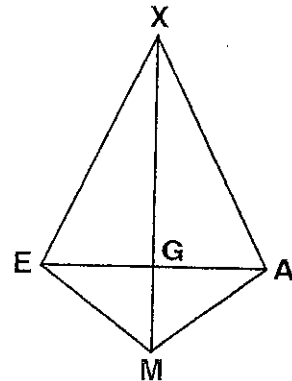
S	R
1) $\overline{RT} \perp \overline{PQ}$ 2) $\angle 3$ & $\angle 4$ are right \angle s 3) $\angle 3 \cong \angle 4$ 4) $\overline{ST} \cong \overline{ST}$ 5) $\triangle STP$ & $\triangle STQ$ are right \triangle s 6) $\triangle STP \cong \triangle STQ$ 7) $\overline{PT} \cong \overline{QT}$ 8) $\overline{RT} \cong \overline{RT}$ 9) $\triangle RTP \cong \triangle RTQ$ 10) $\angle 1 \cong \angle 2$	1) Given 2) \perp lines form right \angle s 3) All right \angle s are \cong 4) Reflexive 5) Right \triangle s have 1 right \angle 6) HL \cong HL 7) CPCTC 8) Reflexive 9) SAS \cong SAS 10) CPCTC



Given: $\overline{AE} \cong \overline{EB}$
 $\overline{DE} \cong \overline{EC}$

Prove: $\angle 1 \cong \angle 2$

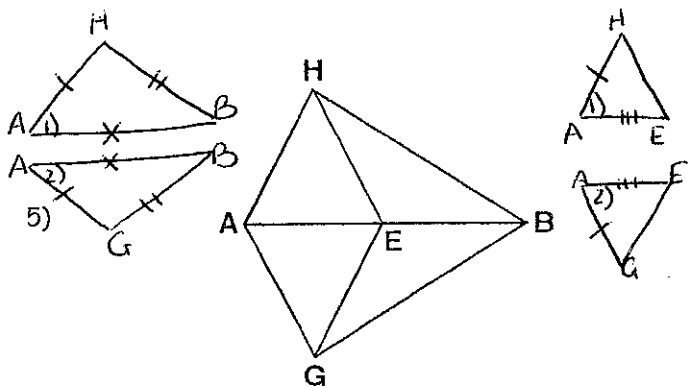
S	R
1) $\overline{AE} \cong \overline{EB}$ $\overline{DE} \cong \overline{EC}$ 2) $\angle 3 \cong \angle 4$ 3) $\triangle AED \cong \triangle BED$ 4) $\angle 1 \cong \angle 2$	1) Given 2) Intersecting lines form \cong vertical \angle s 3) SAS \cong SAS 4) CPCTC



Given: In quadrilateral EXAM, \overline{EA} intersects \overline{XM} at G,
 and \overline{XM} bisects $\angle EXA$ and $\angle EMA$.

Prove: $\overline{EG} \cong \overline{GA}$

S	R
1) $\overline{EG} \cong \overline{GA}$	1) Given 2) \overline{XM} bisects $\angle EXA$ and $\angle EMA$ 3) $\angle XEG \cong \angle XMA$ 4) $\angle XGE \cong \angle XGM$ 5) $\overline{XG} \cong \overline{XG}$ 6) ASA \cong ASA 7) CPCTC

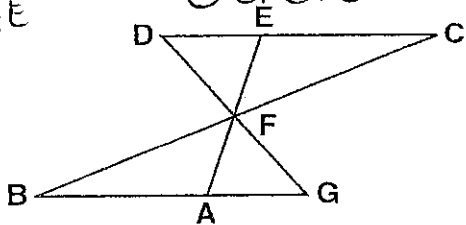


Given: $\overline{AH} \cong \overline{AG}$
 $\overline{HB} \cong \overline{GB}$

Prove: $\overline{HE} \cong \overline{GE}$

- | | |
|--|--|
| <p style="text-align: center;">S</p> <ol style="list-style-type: none"> ① $\overline{AH} \cong \overline{AG}, \overline{HB} \cong \overline{GB}$ ② $\overline{AB} \cong \overline{AB}$ ③ $\triangle HAB \cong \triangle GAB$ ④ $\angle 1 \cong \angle 2$ ⑤ $\overline{AE} \cong \overline{AE}$ ⑥ $\triangle HAE \cong \triangle GAE$ ⑦ $\overline{HE} \cong \overline{GE}$ | <p style="text-align: center;">R</p> <ol style="list-style-type: none"> ① Given ② Reflexive ③ SSS \cong SSS ④ CPCTC ⑤ Reflexive ⑥ SAS \cong SAS ⑦ CPCTC |
|--|--|

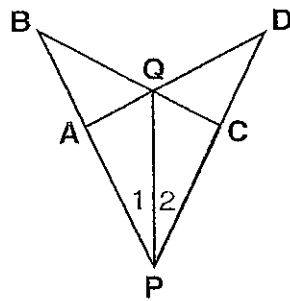
6)



Given: $\overline{BF} \cong \overline{CF}$
 $\overline{EF} \cong \overline{FA}$

Prove: $\overline{DC} \cong \overline{BG}$

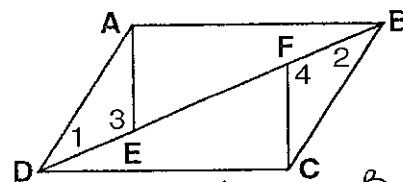
7)



Given: \overline{BC} and \overline{AD} intersect at Q
 $\angle 1 \cong \angle 2$
 $\overline{AP} \cong \overline{PC}$

Prove: $\overline{QB} \cong \overline{QD}$

8)



Given: $\angle 1 \cong \angle 2$
 $\overline{DF} \cong \overline{BE}$
 $\angle 3 \cong \angle 4$

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

- S
- ① $\angle 1 \cong \angle 2, \angle 3 \cong \angle 4$
 - ② $\overline{DF} \cong \overline{BE}$
 - ③ $\overline{EF} \cong \overline{EF}$
 - ④ $\overline{DF} \cong \overline{BE}$
 $\underline{- \overline{EF} \cong \overline{EF}}$
 $\overline{DE} \cong \overline{BF}$
 - ⑤ $\triangle DEA \cong \triangle BFC$
 - ⑥ $\overline{AD} \cong \overline{CB}$
 - ⑦ $\overline{DB} \cong \overline{DB}$
 - ⑧ $\triangle DAB \cong \triangle BCD$
 - ⑨ $\overline{AB} \cong \overline{DC}$

- R
- ① Given
 - ② Given
 - ③ Reflexive
 - ④ Subtraction Postulate
 - ⑤ ASA \cong ASA
 - ⑥ CPCTC
 - ⑦ Reflexive
 - ⑧ SAS \cong SAS
 - ⑨ CPCTC