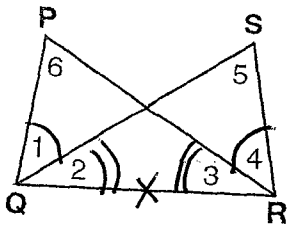
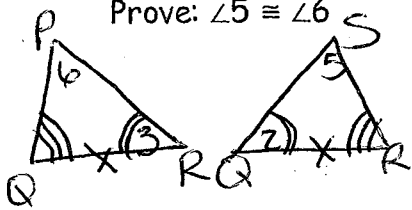


1)



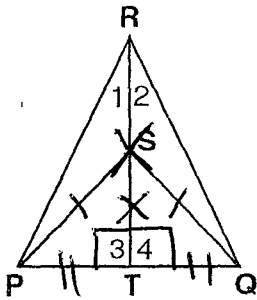
Given: $\angle 1 \cong \angle 4$
 $\angle 2 \cong \angle 3$

Prove: $\angle 5 \cong \angle 6$



S	R
① $\angle 1 \cong \angle 4, \angle 2 \cong \angle 3$	① Given
② $\angle 1 + \angle 2 \cong \angle 4 + \angle 3$	② addition post.
③ $\angle 1 + \angle 2 \cong \angle PQR$ $\angle 4 + \angle 3 \cong \angle SRQ$	③ partition post.
④ $\triangle PQR \cong \triangle SRQ$	④ substitution post.
⑤ $\overline{QR} \cong \overline{QR}$	⑤ reflexive prop.
⑥ $\triangle PQR \cong \triangle SRQ$	⑥ ASA \cong ASA
⑦ $\angle 5 \cong \angle 6$	⑦ CPCTC

2)

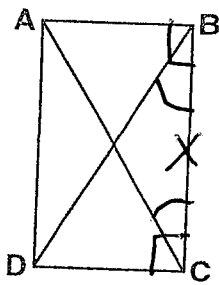


Given: $\overline{RT} \perp \overline{PQ}$
 $\overline{PS} \cong \overline{SQ}$

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

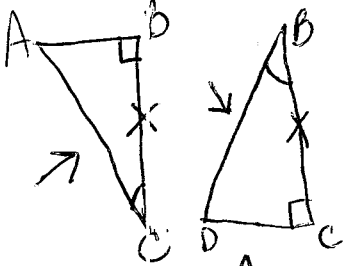
S	R
① $\overline{RT} \perp \overline{PQ}, \overline{PS} \cong \overline{SQ}$	① Given
② $\angle 3 + \angle 4$ are right \angle s	② \perp lines form rt. \angle s
③ $\angle 3 \cong \angle 4$	③ all rt. \angle s are \cong
④ $\triangle PST + \triangle QST$ are right \triangle s	④ a \triangle w/ a rt. \angle is a rt. \triangle .
⑤ $\overline{ST} \cong \overline{ST}$	⑤ reflexive prop.
⑥ $\triangle PST \cong \triangle QST$	⑥ HL \cong HL
⑦ $\overline{PT} \cong \overline{QT}$	⑦ CPCTC
⑧ $\overline{RT} \cong \overline{RT}$	⑧ reflexive prop.
⑨ $\triangle PTR \cong \triangle QTR$	⑨ SAS \cong SAS
⑩ $\angle 1 \cong \angle 2$	⑩ CPCTC

3)

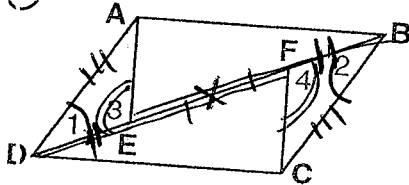


Given: $\overline{AB} \perp \overline{BC}$
 $\overline{DC} \perp \overline{BC}$
 $\angle ACB \cong \angle DBC$

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



4)



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

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

- | S | K |
|---|--|
| ① $\overline{AB} \perp \overline{BC}, \overline{DC} \perp \overline{BC}$
$\angle ACB \cong \angle DBC$ | ① Given |
| ② $\angle ABC$ + $\angle DCB$
are right \angle s | ② \perp Lines form
rt. \angle s |
| ③ $\triangle ABC \cong \triangle DCB$ | ③ all rt. \angle s are \cong |
| ④ $\overline{BC} \cong \overline{BC}$ | ④ reflexive prop. |
| ⑤ $\triangle ABC \cong \triangle DCB$ | ⑤ ASA \cong ASA |
| ⑥ $\overline{AC} \cong \overline{DB}$ | ⑥ CPCTC |

- | S | R |
|--|-------------------------|
| ① $\angle 1 \cong \angle 2, \overline{DF} \cong \overline{BE},$
$\angle 3 \cong \angle 4$ | ① Given |
| ② $\overline{DE} + \overline{EF} \cong \overline{DF}$
$\overline{BF} + \overline{EF} \cong \overline{BE}$ | ② partition
post. |
| ③ $\overline{DE} + \overline{EF} \cong \overline{BF} + \overline{EF}$
$-\overline{EF} \cong -\overline{EF}$ | ③ substitution
post. |
| ④ $\overline{DE} \cong \overline{BF}$ | ④ reflexive prop. |
| ⑤ $\triangle ADE \cong \triangle CBF$ | ⑤ subtraction
post. |
| ⑥ $\overline{AD} \cong \overline{CB}$ | ⑥ ASA \cong ASA |
| ⑦ $\overline{DB} \cong \overline{DB}$ | ⑦ CPCTC |
| ⑧ $\triangle ADB \cong \triangle CBD$ | ⑧ reflexive prop. |
| ⑨ $\overline{AB} \cong \overline{DC}$ | ⑨ SAS \cong SAS |
| | ⑩ CPCTC |