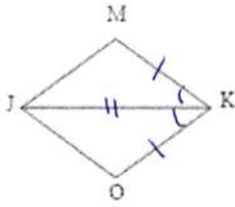


1)



Given: $\overline{MK} \cong \overline{OK}$

\overline{KJ} bisects $\angle MKO$

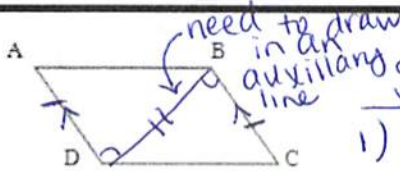
Prove: \overline{KJ} bisects $\angle MJO$

- Statements
- 1) $\overline{MK} \cong \overline{OK}$
 - 2) \overline{KJ} bis. $\angle MKO$
 - 3) $\angle MKJ \cong \angle OKJ$
 - 4) $\overline{JK} \cong \overline{JK}$
 - 5) $\triangle MKJ \cong \triangle OKJ$
 - 6) $\angle MJK \cong \angle OJK$
 - 7) \overline{KJ} bis. $\angle MJO$

Reasons

- 1) Given
- 2) Given
- 3) Def. of bis.
- 4) Ref. Prop.
- 5) SAS \cong
- 6) CPCTC
- 7) Def. of bis.

2)



Given: $\overline{AD} \parallel \overline{BC}$

$\overline{AD} \cong \overline{BC}$

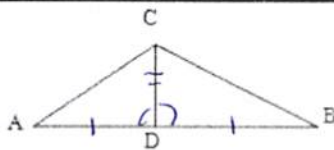
Prove: $\overline{AB} \cong \overline{CD}$

- Statements
- 1) $\overline{AD} \parallel \overline{BC}$
 - 2) $\angle ADB \cong \angle CBD$
 - 3) $\overline{AD} \cong \overline{BC}$
 - 4) $\overline{BD} \cong \overline{DB}$
 - 5) $\triangle ADB \cong \triangle CBD$
 - 6) $\overline{AB} \cong \overline{CD}$

Reasons

- 1) Given
- 2) \parallel lines $\rightarrow \cong$ alt int \angle 's
- 3) Given
- 4) Ref. Prop.
- 5) SAS \cong
- 6) CPCTC

3)



Given: $\overline{CD} \perp \overline{AB}$

D is the mp of \overline{AB}

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

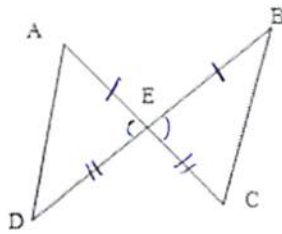
- Statements
- 1) $\overline{CD} \perp \overline{AB}$
 - 2) $\angle ADC$ & $\angle BDC$ are right \angle 's
 - 3) $\angle ADC \cong \angle BDC$
 - 4) D is mp of \overline{AB}
 - 5) $\overline{AD} \cong \overline{DB}$
 - 6) $\overline{CD} \cong \overline{CD}$
 - 7) $\triangle ADC \cong \triangle BDC$
 - 8) $\overline{CA} \cong \overline{CB}$

Reasons

- 1) Given
- 2) \perp lines form 4 right \angle 's
- 3) All right \angle 's are \cong .
- 4) Given
- 5) def. of mp.
- 6) ref. prop.
- 7) SAS \cong
- 8) CPCTC

Figure not drawn to scale

4)



Given: $\overline{AE} \cong \overline{BE}$

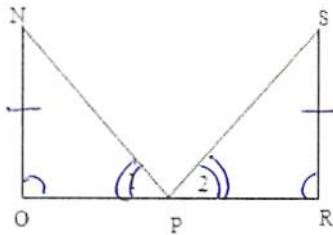
$\overline{DE} \cong \overline{CE}$

Prove: $\angle D \cong \angle C$

- Statements
- 1) $\overline{AE} \cong \overline{BE}$
 - 2) $\overline{DE} \cong \overline{CE}$
 - 3) $\angle AED \cong \angle BEC$
 - 4) $\triangle AED \cong \triangle BEC$
 - 5) $\angle D \cong \angle C$

- Reasons
- 1) Given
 - 2) Given
 - 3) Vert \angle 's are \cong .
 - 4) SAS \cong
 - 5) CPCTC

5)



Given: $\overline{NO} \perp \overline{OR}, \overline{SR} \perp \overline{OR}$
 $\angle 1 \cong \angle 2, \overline{NO} \cong \overline{SR}$

Prove: $\overline{NP} \cong \overline{SP}$

- Statements
- 1) $\overline{NO} \perp \overline{OR}, \overline{SR} \perp \overline{OR}$
 - 2) $\angle NOP$ & $\angle SRP$ are right \angle 's
 - 3) $\angle NOP \cong \angle SRP$
 - 4) $\angle 1 \cong \angle 2$ & $\overline{NO} \cong \overline{SR}$
 - 5) $\triangle NOP \cong \triangle SRP$
 - 6) $\overline{NP} \cong \overline{SP}$

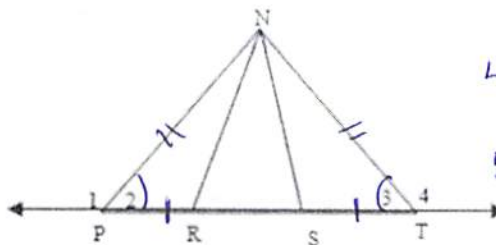
- Reasons
- 1) Given
 - 2) \perp lines form 4 right \angle 's
 - 3) All right \angle 's are \cong .
 - 4) Given
 - 5) AAS \cong
 - 6) CPCTC

6) Given: $\angle 1 \cong \angle 4$

$PR = ST$

$\overline{NP} \cong \overline{NT}$

Prove: $\angle PNR \cong \angle TNS$



- Statements
- 1) $\angle 1 \cong \angle 4$
 - 2) $m\angle 1 = m\angle 4$
 - 3) $\angle 1$ & $\angle 2$ form lin pr;
 $\angle 3$ & $\angle 4$ form lin pr
 - 4) $m\angle 1 + m\angle 2 = 180$;
 $m\angle 3 + m\angle 4 = 180$
 - 5) $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$
 - 6) $m\angle 4 + m\angle 2 = m\angle 3 + m\angle 4$
 - 7) $m\angle 2 = m\angle 3$
 - 8) $\angle 2 \cong \angle 3$
 - 9) $PR = ST$
 - 10) $\overline{PR} \cong \overline{ST}$
 - 11) $\overline{NP} \cong \overline{NT}$
 - 12) $\triangle NPR \cong \triangle NTS$
 - 13) $\angle PNR \cong \angle TNS$

- Reasons
- 1) Given
 - 2) Def $\cong \angle$'s
 - 3) Def. lin. pr
 - 4) Lin Pr Post.
 - 5) subst. prop.
 - 6) subst. prop.
 - 7) subtr. prop.
 - 8) Def. $\cong \angle$'s
 - 9) Given
 - 10) Def. \cong seg.
 - 11) Given
 - 12) SAS
 - 13) CPCTC