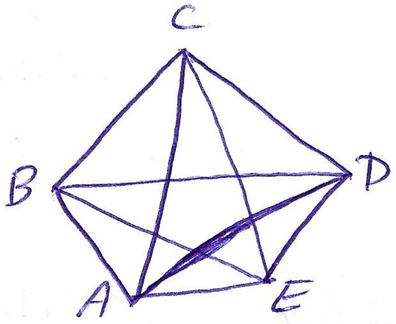
#40 P 263

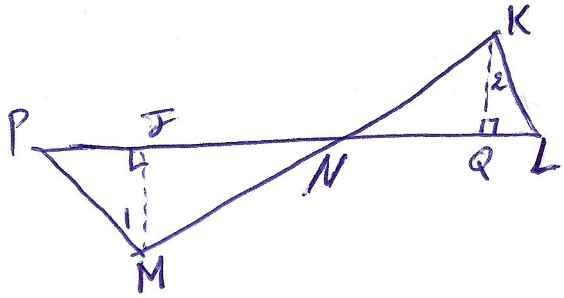


$\overline{AB} \parallel \overline{EC}$, $\overline{AC} \parallel \overline{ED}$ $\overline{AB} \cong \overline{ED}$, $\overline{AC} \cong \overline{EC}$	Given
$\angle DEC \cong \angle ECA$ $\angle ECA \cong \angle BAC$	Alt. int. ∠s Th.
$\angle DEC \cong \angle BAC$	Trans. prop of ∠≅
$\triangle DEC \cong \triangle BAC$	SAS Post
$\overline{BC} \cong \overline{CD}$, $\angle BCA \cong \angle DCE$	CPCT
$m\angle BCA = m\angle DCE$	Def of ≅ ∠s
$m\angle BCA + m\angle ACE = m\angle DCE + m\angle ACE$	Addition prop of =
$m\angle BCE = m\angle DCA$	∠s addition Post.
$\angle BCE \cong \angle DCA$	Def of ≅ ∠s
$\triangle BCE \cong \triangle DCA$	SAS Post
$\overline{AD} \cong \overline{EB}$	CPCT

#37 P262 Given: $\overline{MN} \cong \overline{KN}$

$\angle PMN \cong \angle NKL$

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

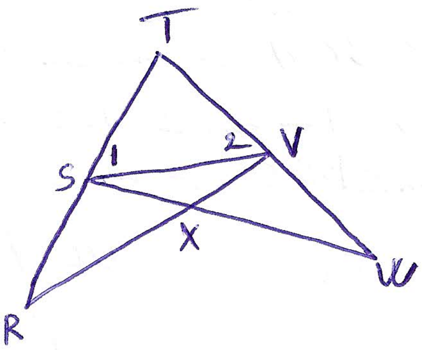


$\overline{MN} \cong \overline{KN}$, $\angle PMN \cong \angle NKL$	Given
$\angle MNP \cong \angle KNL$	vertical ∠s ≅ Th.
$\triangle PMN \cong \triangle LKN$	ASA Post.
$\overline{MP} \cong \overline{KL}$, $\angle MPJ \cong \angle KLQ$	CPCT
$\overline{MJ} \perp \overline{PN}$, $\overline{KQ} \perp \overline{LN}$	Given in diagram
$\angle KQL$ and $\angle MJP$ are right ∠s	⊥ lines intersect to form 4 right ∠s.
$\angle KQL \cong \angle MJP$	Right ∠s ≅ Th.
$\triangle MJP \cong \triangle KQL$	AAS Th.
$\angle 1 \cong \angle 2$	CPCT

#38 P262 Given: $\overline{TS} \cong \overline{TV}$

$\overline{SR} \cong \overline{VW}$

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



$\overline{TS} \cong \overline{TV}$, $\overline{SR} \cong \overline{VW}$	Given
$TS = TV$, $SR = VW$	Def. of ≅ seg.
$TS + TR = TR$, $TV + VW = TW$	seg. addition Post
$TV + SR = TR$, $TV + SR = TW$	subst. Prop. of =
$TR = TW$	Trans. prop. of =
$\overline{TR} \cong \overline{TW}$	Def. of ≅ seg.
$\angle RTV \cong \angle WTS$	Refl. prop. of ≅
$\triangle RTV \cong \triangle WTS$	SAS Post.
$\overline{RV} \cong \overline{WS}$	CPCT
$\overline{SV} \cong \overline{VS}$	Refl. prop of ≅
$\triangle RSV \cong \triangle WVS$	SSS
$\angle RSV \cong \angle 1$, $\angle WVS$ and $\angle 2$ are suppl. ∠s	Def of suppl. ∠s.
$\angle 1 \cong \angle 2$	≅ suppl. Th.