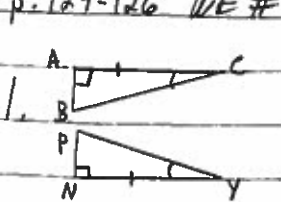


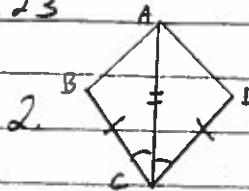
A#30

Key

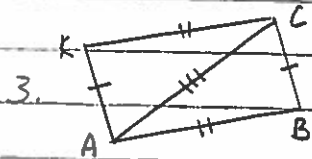
p. 124-126 WE # 1-19, 22, 23



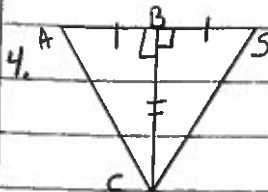
$\angle A \cong \angle N$ [Rt. Ang. Thm.]
 $\triangle ABC \cong \triangle NPY$ [ASA \cong Post]



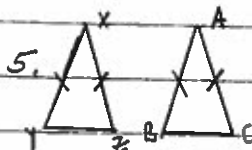
$\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]
 $\triangle ABC \cong \triangle ADC$ [SAS \cong Post]



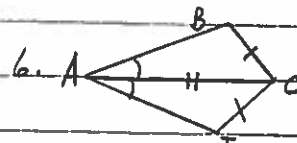
$\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]
 $\triangle ABC \cong \triangle CKA$ [SSS \cong Post]



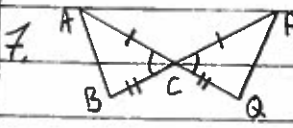
$\overline{BC} \cong \overline{SC}$ [Ref. Prop. of \cong]
 $\angle ABC \cong \angle SBC$ [\perp lines form \cong adj. \angle s]
 $\triangle ABC \cong \triangle SBC$ [SAS \cong Post]



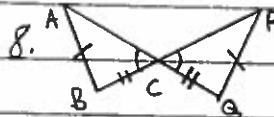
[Not enough info.]
 [Need either the 3rd sides or included \angle s.]



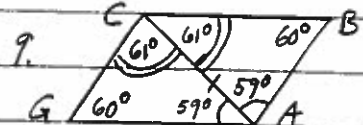
$\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]
 [Not enough info \rightarrow the \angle s are not included.]



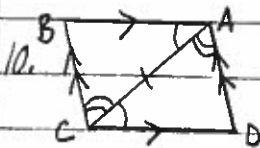
$\angle ACB \cong \angle PCQ$ [Vert. \angle s Thm.]
 $\triangle ABC \cong \triangle PQC$ [SAS \cong Post]



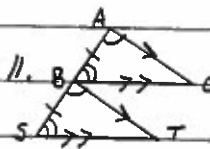
$\angle ACB \cong \angle PCQ$ [Vert. \angle s Thm.]
 [Not Enough Info \rightarrow \angle s not included]



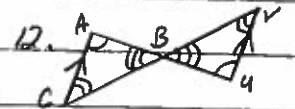
$m\angle CAG = 59^\circ$, $m\angle BCA = 60^\circ$ [Δ sum thm.]
 $\angle GCA \cong \angle BCA$, $\angle CAG \cong \angle CAB$ [Def. \cong \angle s]
 $\overline{CA} \cong \overline{CA}$ [Ref. Prop. of \cong]
 $\triangle ABC \cong \triangle AGC$ [ASA \cong Post]



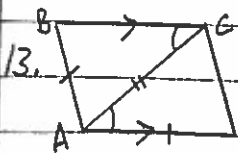
$\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]
 $\angle BAC \cong \angle DCA$, $\angle ACB \cong \angle CAD$ [Alt. Int. \angle s Thm.]
 $\triangle ABC \cong \triangle CDA$ [ASA \cong Post]



$\angle A \cong \angle C$, $\angle B \cong \angle D$ [Cor. \angle s Post]
 $\triangle ABC \cong \triangle DST$ [ASA \cong Post]

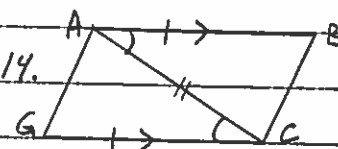


$\angle A \cong \angle U$, $\angle C \cong \angle V$ [Alt. Int. \angle s Thm.]
 $\angle ABC \cong \angle VBU$ [Vert. \angle s Thm.]

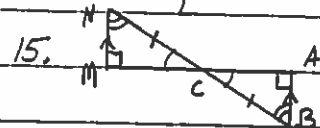


$\angle BCA \cong \angle FAC$ [Alt. Int. \angle s Thm.]
 $\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]

[Not enough info \rightarrow the \angle s are not included in both Δ s.]



$\angle BAC \cong \angle GCA$ [Alt. Int. \angle s Thm.]
 $\overline{AC} \cong \overline{AC}$ [Ref. Prop. of \cong]
 $\triangle ABC \cong \triangle CGA$ [SAS \cong Post]



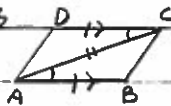
[Not enough info \rightarrow No pair of sides]
 $\angle NCM \cong \angle BCA$ [Vert. \angle s Thm.]
 $NM \parallel AB$ [In a plane, 2 lines \perp to the same line are \parallel]
 $\angle N \cong \angle B$ [Alt. Int. \angle s Thm.]
 $\triangle ABC \cong \triangle MNC$ [ASA \cong Post]

A#30 continued

Key

P. 125-126 WE #16-19, 22, 23

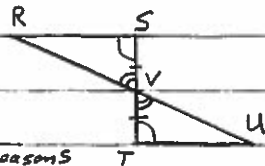
16. Given: $\overline{AB} \parallel \overline{DC}$; $\overline{AB} \cong \overline{DC}$



Prove: $\triangle ABC \cong \triangle CDA$

Statements	Reasons
① $\overline{AB} \cong \overline{DC}$	① Given
② $\overline{AC} \cong \overline{AC}$	② Refl. Prop. of \cong
③ $\overline{AB} \parallel \overline{DC}$	③ Given
④ $\angle BAC \cong \angle DCA$	④ Alt. Int. \angle s Thm
⑤ $\triangle ABC \cong \triangle CDA$	⑤ SAS \cong Post.

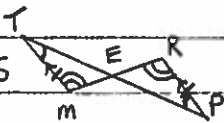
17. Given: $\overline{RS} \perp \overline{ST}$; $\overline{TV} \perp \overline{ST}$
 17. Given: V is the midpt of \overline{ST}



Prove: $\triangle RSV \cong \triangle UTV$

Statements	Reasons
① $\overline{RS} \perp \overline{ST}$; $\overline{TV} \perp \overline{ST}$	① Given
② $m\angle S = 90^\circ$; $m\angle T = 90^\circ$	② Def. of \perp
③ $\angle S \cong \angle T$	③ Def. of $\cong \angle$ s
④ V is the midpt of \overline{ST} .	④ Given
⑤ $\overline{SV} \cong \overline{VT}$	⑤ Def. of midpoint
⑥ $\angle RVS \cong \angle UVT$	⑥ Vert. \angle s Thm
⑦ $\triangle RSV \cong \triangle UTV$	⑦ ASA \cong Post.

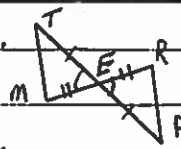
18. Given: $\overline{TM} \cong \overline{PR}$; $\overline{TM} \parallel \overline{RP}$



Prove: $\triangle TEM \cong \triangle PER$

Statements	Reasons
① $\overline{TM} \cong \overline{PR}$; $\overline{TM} \parallel \overline{RP}$	① Given
② $\angle T \cong \angle P$, $\angle M \cong \angle R$	② Alt. Int. \angle s Thm
③ $\triangle TEM \cong \triangle PER$	③ ASA \cong Post

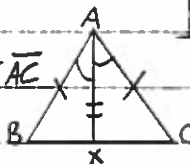
19. Given: E is the midpoint of \overline{TP} and \overline{MR} .



Prove: $\triangle TEM \cong \triangle PER$

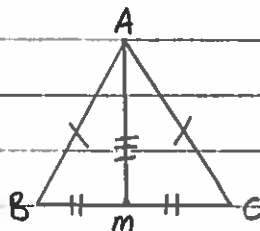
Statements	Reasons
① E is the midpt of \overline{TP} and \overline{MR} .	① Given
② $\overline{TE} \cong \overline{PE}$, $\overline{ME} \cong \overline{RE}$	② Def. of midpt
③ $\angle TEM \cong \angle PER$	③ Vert. \angle s Thm
④ $\triangle TEM \cong \triangle PER$	④ SAS \cong Post.

22. Given: \overline{AX} bisects $\angle A$, $\overline{AB} \cong \overline{AC}$



Prove: $\triangle BAX \cong \triangle CAX$

Statements	Reasons
① \overline{AX} bisects $\angle A$, $\overline{AB} \cong \overline{AC}$	① Given
② $\angle BAX \cong \angle CAX$	② Def. of \angle bisector
③ $\overline{AX} \cong \overline{AX}$	③ Refl. Prop. of \cong
④ $\triangle BAX \cong \triangle CAX$	④ SAS \cong Post



23. Given: M is the midpt of \overline{BC} , $\overline{AB} \cong \overline{AC}$

Prove: $\triangle ABM \cong \triangle ACM$

Statements	Reasons
① M is the midpt of \overline{BC} , $\overline{AB} \cong \overline{AC}$	① Given
② $\overline{BM} \cong \overline{CM}$	② Def. of midpt
③ $\overline{AM} \cong \overline{AM}$	③ Refl. Prop. of \cong
④ $\triangle ABM \cong \triangle ACM$	④ SSS \cong Post