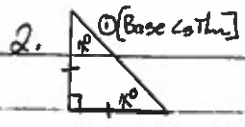
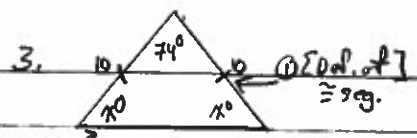


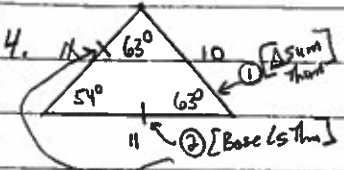
1. $\{ \text{Base } \angle \text{ s Thm} \}$
 ② $x + 100 = 180 \{ \Delta \text{ Sum Thm} \}$
 $x = 80$



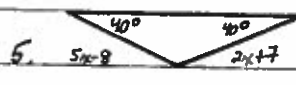
2. ① $\{ \text{Base } \angle \text{ s Thm} \}$
 ② $2x + 90 = 180 \{ \Delta \text{ Sum Thm} \}$
 $2x = 90$
 $x = 45$



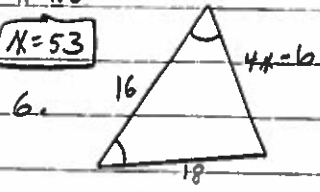
3. ① $\{ \text{Def. of } \cong \}$
 ② $\{ \text{Base } \angle \text{ s Thm} \}$
 ③ $2x + 74 = 180 \{ \Delta \text{ Sum Thm} \}$
 $2x = 106$
 $x = 53$



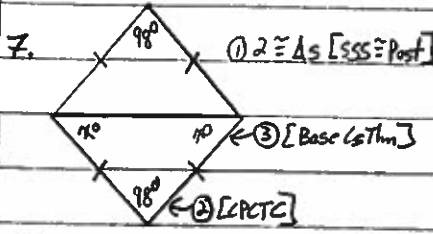
4. ① $\{ \Delta \text{ Sum Thm} \}$
 ② $\{ \text{Base } \angle \text{ s Thm} \}$
 ③ $x = 11 \{ \text{Def. of } \cong \}$



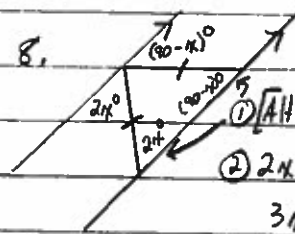
5. ① $5x - 8 = 2x + 7 \{ \text{Base } \angle \text{ s Thm} \}$
 $3x = 15$
 $x = 5$



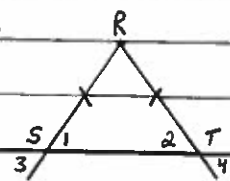
6. ① $4x - 6 = 18 \{ \text{Base } \angle \text{ s Thm} \}$
 $4x = 24$
 $x = 6$



7. ① $2 \cong \Delta \text{ s } \{ \text{SSS } \cong \text{ Post} \}$
 ② $\{ \text{Base } \angle \text{ s Thm} \}$
 ③ $\{ \text{LRPTC} \}$
 ④ $2x + 98 = 180 \{ \Delta \text{ Sum Thm} \}$
 $2x = 82$
 $x = 41$

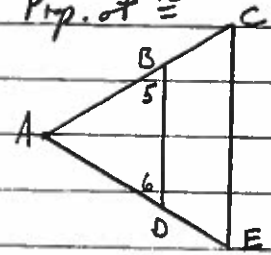


8. ① $\{ \text{Alt. Int. } \angle \text{ s Thm} \}$
 ② $2x = 90 - x \{ \text{Base } \angle \text{ s Thm} \}$
 $3x = 90$
 $x = 30$



	Statements	Reasons
9. Given:	$\overline{RS} \cong \overline{RT}$	① Given
Prove:	$\angle 3 \cong \angle 4$	② Base \angle s Thm
	③ $\angle 1 \cong \angle 2$	③ Vert. \angle s Thm
	④ $\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$	④ Trans. Prop. of \cong
	④ $\angle 3 \cong \angle 4$	

10. Given: $\overline{BD} \parallel \overline{CE}; \angle 5 \cong \angle 6$
 Prove: $\overline{AC} \cong \overline{AE}$



	Statements	Reasons
10. Given:	$\overline{BD} \parallel \overline{CE}; \angle 5 \cong \angle 6$	① Given
Prove:	$\overline{AC} \cong \overline{AE}$	② Alt. Int. \angle s Thm
	③ $\angle C \cong \angle E$	③ Trans. Prop. of \cong
	④ $\overline{AC} \cong \overline{AE}$	④ Base \angle s Thm

A#33 continued
p. 137-138 WE #13-14, 17-18, 21

Key

13. Given: M is the midpoint of \overline{JK} ; $\angle 1 \cong \angle 2$

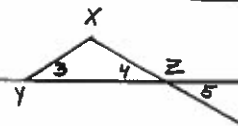
Prove: $\overline{JG} \cong \overline{MK}$

Statements	Reasons
① $\angle 1 \cong \angle 2$	① Given
② $\overline{JM} \cong \overline{KM}$	② Def. of Midpt
③ $\overline{JM} \cong \overline{MK}$	③ Trans. Prop. of \cong
④ $\overline{JG} \cong \overline{MK}$	④ Base Ls Thm

14. Given: $\overline{XY} \cong \overline{XZ}$

Prove: $\angle 3 \cong \angle 5$

Statements	Reasons
① $\overline{XY} \cong \overline{XZ}$	① Given
② $\angle 3 \cong \angle 4$	② Base Ls Thm
③ $\angle 4 \cong \angle 5$	③ Vert. Ls Thm
④ $\angle 3 \cong \angle 5$	④ Trans. Prop. of \cong



17. Given: $\overline{XY} \cong \overline{XZ}$; $\overline{OY} \cong \overline{OZ}$

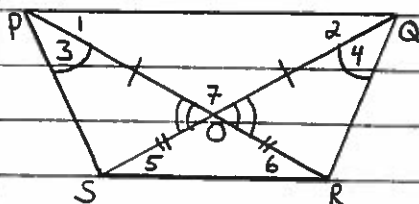
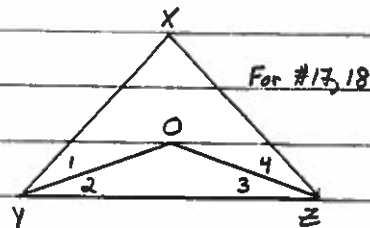
Prove: $m\angle 1 = m\angle 4$

Statements	Reasons
① $\overline{XY} \cong \overline{XZ}$; $\overline{OY} \cong \overline{OZ}$	① Given
② $\angle XOY \cong \angle XOZ$	② Base Ls Thm
③ $m\angle XOY = m\angle XOZ$	③ Def. of \cong Ls
④ $m\angle XOY = m\angle 1 + m\angle 2$ $m\angle XOZ = m\angle 3 + m\angle 4$	④ \angle Add Post
⑤ $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$	⑤ Trans. Prop. of =
⑥ $m\angle 1 = m\angle 4$	⑥ Subtr. Prop. of = (5-3)

18. Given: $\overline{XY} \cong \overline{XZ}$; \overline{YO} bisects $\angle XYZ$; \overline{ZO} bisects $\angle XZY$

Prove: $\overline{YO} \cong \overline{ZO}$

Statements	Reasons
① $\overline{XY} \cong \overline{XZ}$; \overline{YO} bisects $\angle XYZ$; \overline{ZO} bisects $\angle XZY$	① Given
② $\angle XOY \cong \angle XOZ$	② Base Ls Thm
③ $m\angle XOY = m\angle XOZ$	③ Def. of \cong Ls
④ $m\angle 2 = \frac{1}{2} m\angle XYZ$; $m\angle 3 = \frac{1}{2} m\angle XZY$	④ \angle bisector thm #1
⑤ $m\angle 2 = m\angle 3$	⑤ Subtr. Prop. of = (3-4)
⑥ $\angle 2 \cong \angle 3$	⑥ Def. of \cong Ls
⑦ $\overline{YO} \cong \overline{ZO}$	⑦ Base Ls Thm



21. Given: $\overline{OP} \cong \overline{OQ}$; $\angle 3 \cong \angle 4$

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

Statements	Reasons
① $\overline{OP} \cong \overline{OQ}$; $\angle 3 \cong \angle 4$	① Given
② $\angle POS \cong \angle QOR$	② Vert. Ls Thm
③ $\triangle POS \cong \triangle QOR$	③ ASA \cong Post
④ $\overline{OS} \cong \overline{OR}$	④ CPCTC
⑤ $\angle 5 \cong \angle 6$	⑤ Base Ls Thm