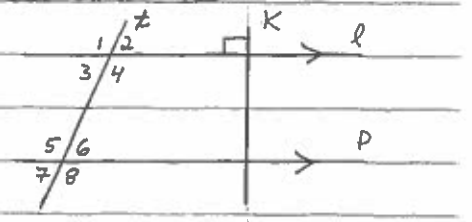
p. 80-81
① CE #1-13
A#22 ② WE #7-13

Key

For Ex # 1-13



① p. 80 CE #1-13

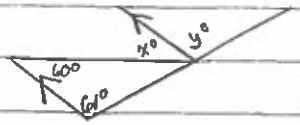
1. The arrow heads tell you $l \parallel p$.
2. $\angle 1 \cong \angle 5$ [Corr. Ls Post.]
3. $\angle 3 \cong \angle 6$ [Alt. Int. Ls Thm]
4. $m\angle 4 + m\angle 6 = 180°$ [S.S. Int. Ls Thm and Def. of Supp. Ls]
5. $m\angle 4 = m\angle 8$ [Corr. Ls Post and Def. of $\cong$ Ls]
6. $m\angle 4 = m\angle 5$ [Alt. Int. Ls Thm and Def. of $\cong$ Ls]
7. $\angle 6 \cong \angle 7$ [Vert. Ls Thm]
8. $K \perp p$ [$\perp$ Transversal Thm]
9. $\angle 3$ is supp. to $\angle 5$ [S.S. Int. Ls Thm]
10. ① $m\angle 1 = 130°$ [Given]
    ② $m\angle 2 = 50° = m\angle 3$ [$\angle$ Add Post]
    ③ $m\angle 4 = 130°$ [Vert. Ls Thm and Def. of $\cong$ Ls]
    ④ $m\angle 5 = 130°$, $m\angle 6 = 50°$, $m\angle 7 = 50°$, $m\angle 8 = 130°$ [Corr. Ls Post and Def. of $\cong$ Ls]
11. ① $m\angle 1 = x°$ [Given]
    ② $m\angle 2 = (90 - x)° = m\angle 3$ [$\angle$ Add Post]
    ③ $m\angle 4 = x°$ [Vert. Ls Thm and Def. of $\cong$ Ls]
    ④ $m\angle 5 = x°$, $m\angle 6 = (90 - x)°$, $m\angle 7 = (90 - x)°$, $m\angle 8 = x°$ [Corr. Ls Post and Def. of $\cong$ Ls]
12. ① $m\angle 4 = 2m\angle 3$ [Given]
    ② $m\angle 3 + m\angle 4 = 180°$ [$\angle$ Add Post]
    ③ $m\angle 3 + 2m\angle 3 = 180°$ [Subst. Prop. of = (① → ②)]
    $3m\angle 3 = 180°$
    $m\angle 3 = 60°$
    ④ $\boxed{m\angle 6 = 60°}$ [Alt. Int Ls Thm and Def. of $\cong$ Ls]
13. ① $m\angle 5 = m\angle 6 + 20°$ [Given]
    ② $m\angle 5 + m\angle 6 = 180°$ [$\angle$ Add Post]
    ③ $m\angle 6 + 20° + m\angle 6 = 180°$ [Subst. Prop. of = (① → ②)]
    $2m\angle 6 = 160°$
    $m\angle 6 = 80°$
    ④ $m\angle 5 = 100°$ [$\angle$ Add Post]
    ⑤ $\boxed{m\angle 1 = 100°}$ [Corr. Ls Post and Def. of $\cong$ Ls]

A#22 continued

Key

[2] p. 81 WE # 7-13 * Diagrams not drawn to scale!

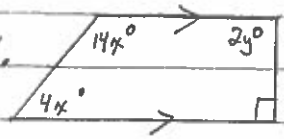
7.



① $x = 60$ [Alt. Int. $\angle$s Thm]

② $y = 61$ [Corr. $\angle$s Post.]

8.



① $14x + 4x = 180°$ [S.S. Int. $\angle$s Thm]

$18x = 180$

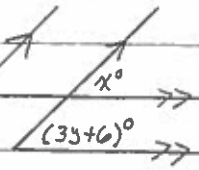
$x = 10$

② $2y + 90 = 180$ [S.S. Int. $\angle$s Thm]

$2y = 90$

$y = 45$

9.



① $x + 120 = 180$ [S.S. Ext. $\angle$s Thm]

$x = 60$

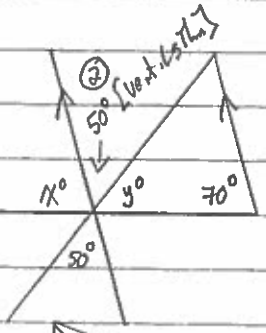
② $3y + 6 = x$ [Corr. $\angle$s Post.]

$3y + 6 = 60$ [Trans. Prop. of =]

$3y = 54$

$y = 18$

10.



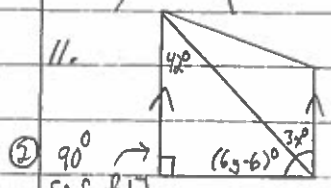
① $x = 70$ [Corr. $\angle$s Post]

③ $y + x + 50 = 180$ [$\angle$ Add Post]

$y + 70 + 50 = 180$ [Subst. Prop. of = (① → ③)]

$y = 60$

11.



① $3x = 42$ [Alt. Int. $\angle$s Thm]

$x = 14$

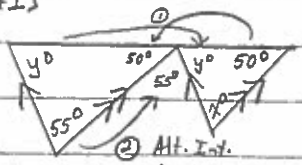
③ $6y - 6 + 3x + 90 = 180$ [$\angle$ Add Post and S.S. Int. $\angle$s Thm]

$6y - 6 + 42 + 90 = 180$ [Subst. Prop. of = (① → ③)]

$6y = 54$

$y = 9$

12.



① See diagram additions. [Corr. $\angle$s Post]

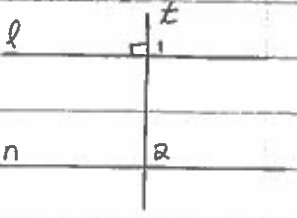
③ $y + 55 + 50 = 180$ [$\angle$ Add Post]

$y = 75$

④ $x = 55$ [Alt. Int. $\angle$s Thm]

13. Given: $t \perp l$; $l \parallel n$

Prove: $t \perp n$



Statements	Reasons
1. $t \perp l$	1. Given
2. $m\angle 1 = 90°$	2. Def. of $\perp$
3. $l \parallel n$	3. Given
4. $\angle 2 \cong \angle 1$ / $m\angle 2 = m\angle 1$	4. Corr. $\angle$s Post / Def. of $\cong$ $\angle$s
5. $m\angle 2 = 90°$	5. Subst. Prop. of = (2 → 4)
6. $t \perp n$	6. Def. of $\perp$