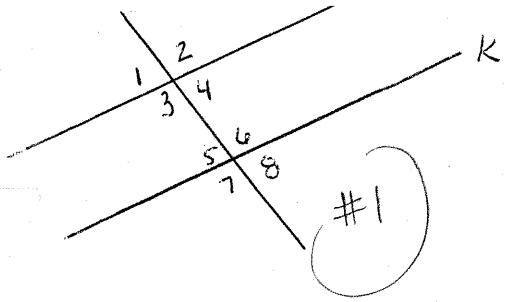
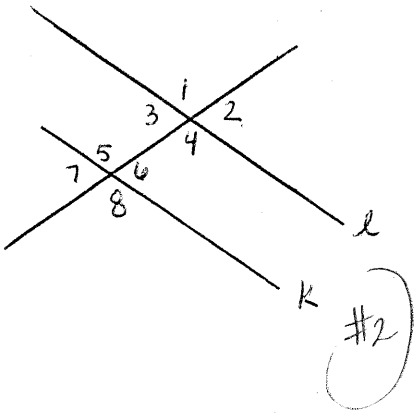


Given: line l is parallel to line k

$m\angle 1 = 80°$

** Prove: $m\angle 8 = 80°$

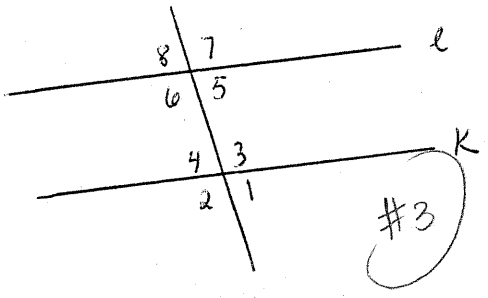
Statements:	Justifications:
1. $l \parallel k$	1. Given
2. $\angle 1$ and $\angle 8$ are alt. ext. $\angle$s	2. Def. of alt ext $\angle$s
3. $\angle 1 \cong \angle 8$	3. Alt. Ext. $\angle$s Thm
4. $m\angle 1 = m\angle 8$	4. Def. of cong angles
5. $m\angle 1 = 80°$	5. Given
6. $80° = m\angle 8$	6. Subst. Prop of Eq
7. $m\angle 8 = 80°$	7. Symm. Prop of Eq.



Given: line l is parallel to line k

** Prove: $m\angle 2 = m\angle 7$

Statements:	Justifications:
1. $l \parallel k$	1. Given
2. $\angle 2$ & $\angle 7$ are alt. ext. $\angle$s	2. Def. of alt. ext. $\angle$s
3. $\angle 2 \cong \angle 7$	3. Alt. Ext $\angle$s Thm
4. $m\angle 2 = m\angle 7$	4. Def. of cong angles



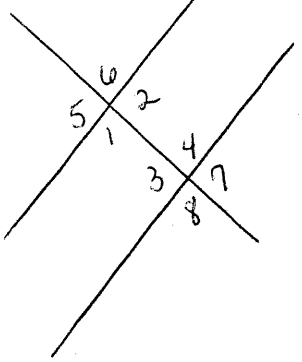
#3

Given: line l is parallel to line k

Prove: $\angle 5$ & $\angle 2$ are supplementary

Statements:	Justifications:
1. $l \parallel k$	1. Given
2. $\angle 5$ & $\angle 3$ are same-side int $\angle$s	2. Def of same-side int $\angle$s
3. $\angle 5$ & $\angle 3$ are supp $\angle$s	3. Same-side int $\angle$ Thm
4. $m\angle 5 + m\angle 3 = 180°$	4. Def of supp $\angle$s
5. $\angle 3$ and $\angle 2$ are vert $\angle$s	5. Def of vert $\angle$s
6. $\angle 3 \cong \angle 2$	6. Vert $\angle$s Thm
7. $m\angle 3 = m\angle 2$	7. Def. of cong $\angle$s
8. $m\angle 5 + m\angle 2 = 180°$	8. Subst. Prop of Eq
9. $\angle 5$ & $\angle 2$ are supp. $\angle$s	9. Def of supp $\angle$s.

PROOFS can vary in #3 and #4



#4

Given: line l is parallel to line k
$m\angle 2 = 105°$

Prove: $m\angle 8 = 75°$

Statements:	Justifications:
1. $l \parallel k$	1. Given
2. $\angle 2$ & $\angle 4$ are same-side int. $\angle$s	2. Def. of same-side int $\angle$s
3. $\angle 2$ & $\angle 4$ are supp. $\angle$s	3. Same-side int. $\angle$s Thm
4. $m\angle 2 + m\angle 4 = 180°$	4. Def. of supp $\angle$s
5. $\angle 4$ & $\angle 8$ are vert $\angle$s	5. Def of vert $\angle$s
6. $\angle 4 \cong \angle 8$	6. Vert $\angle$s Thm
7. $m\angle 4 = m\angle 8$	7. Def of cong $\angle$s.
8. $m\angle 2 + m\angle 8 = 180°$	8. Subst. Prop of Eq
9. $m\angle 2 = 105°$	9. Given
10. $105° + m\angle 8 = 180$	10. Subst. Prop of Eq
11. $m\angle 8 = 75°$	11. Sub. Prop of Eq.