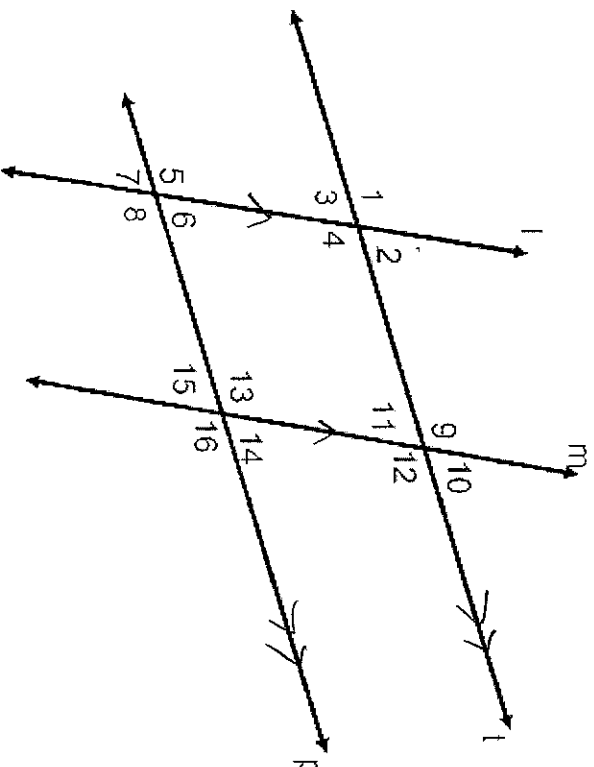


*Mary*

1. Given:  $l \parallel m$  and  $l \parallel p$

Prove:  $\angle 2 \cong \angle 14$

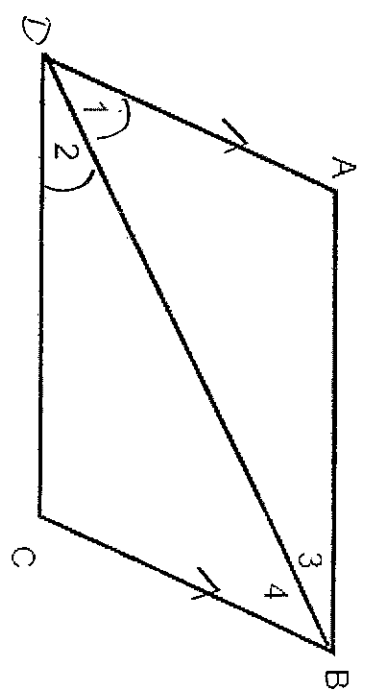


Statements	Reasons
1. $l \parallel m$ ; $l \parallel p$	1. Given
2. $\angle 2 \cong \angle 6$	2. $\parallel$ lines $\rightarrow$ corr. $\angle$ s $\cong$
$\angle 6 \cong \angle 14$	
3. $\angle 2 \cong \angle 14$	3. Transitive

2. Given:  $\overline{AD} \parallel \overline{BC}$

$$m\angle 1 = m\angle 2$$

Prove:  $m\angle 1 + m\angle 2 + m\angle 3 = 180$

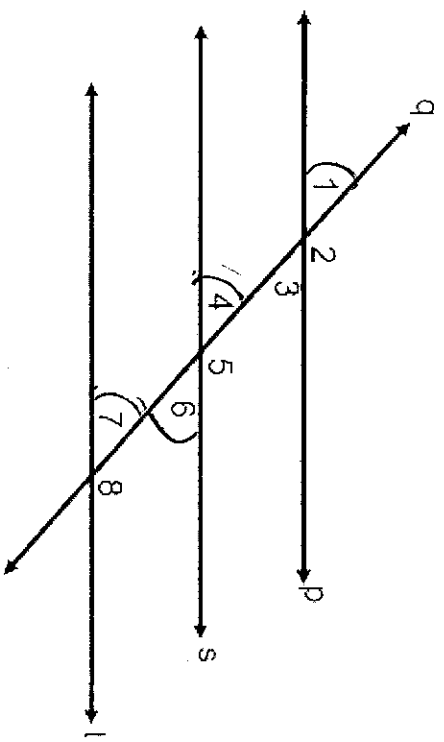


Statements	Reasons
1. $\overline{AD} \parallel \overline{BC}$ ; $m\angle 1 = m\angle 2$	1. Given
2. $\angle 1 \cong \angle 4$	2. Alt. int. $\angle$ 's $\cong$
3. $m\angle 1 = m\angle 4$	3. def. $\cong$
3b. $m\angle 2 = m\angle 4$	3b. Substitution
4. $\angle 1$ & $\angle 4$ + $\angle ABC$ are supp.	4. $\parallel$ lines $\rightarrow$ SS int. $\angle$ 's supp.
5. $m\angle 1 + m\angle ABC = 180$	5. def. supp.
6. $m\angle 3 + m\angle 4 = m\angle ABC$	6. $\angle$ addn. post.
7. $m\angle 1 + m\angle 3 + m\angle 4 = 180$	7. Substitution
8. $m\angle 1 + m\angle 2 + m\angle 3 = 180$	8. Substitution
	a

3. Given:  $\angle 1 \cong \angle 6$

$$m\angle 4 = m\angle 7$$

Prove:  $p \parallel r$

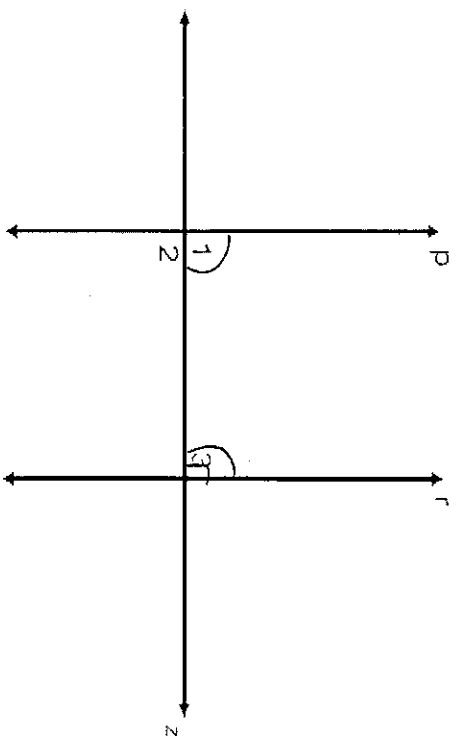


Statements	Reasons
1. $\angle 1 \cong \angle 6$ ; $m\angle 4 = m\angle 7$	1. Given
2. $\angle 4 \cong \angle 7$	2. def. $\cong$
3. $\angle 6 \cong \angle 4$	3. Vert. $\angle$ s $\cong$
4. $\angle 1 \cong \angle 4$	4. Transitive
5. $p \parallel s$ ; $s \parallel l$	5. Corr. $\angle$ s $\cong \rightarrow \parallel$ lines
6. $p \parallel l$	6. 2 lines $\parallel$ to 3 <sup>rd</sup> line are $\parallel$ to each other

4. Given:  $\angle 1 \cong \angle 3$

$\angle 3$  is a right angle

Prove:  $p \parallel r$



Statements	Reasons
1. $\angle 1 \cong \angle 3$ ; $\angle 3$ is a r.t. $\angle$	1. Given
2. $m\angle 1 = m\angle 3$	2. def. $\cong$
3. $m\angle 3 = 90$	3. def. r.t. $\angle$
4. $m\angle 1 = 90$	4. Substitution
5. $\angle 1$ is a r.t. $\angle$	5. def. r.t. $\angle$
6. $P \perp Z$ ; $r \perp Z$	6. def. $\perp$
7. $P \parallel r$	7. 2 lines $\perp$ to $tn \rightarrow$ lines $\parallel$