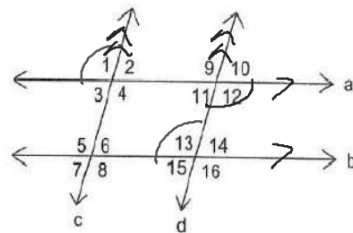


1. Given:  $a \parallel b$ ;  $c \parallel d$

Prove:  $\angle 1 \cong \angle 13$

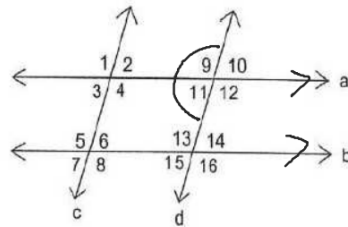


Statements	Reasons
1. $a \parallel b$ ; $c \parallel d$	1. Given
2. $\angle 1 \cong \angle 12$	2. Alternate Exterior
3. $\angle 12 \cong \angle 13$	3. Alternate Interior
4. $\angle 1 \cong \angle 13$	4. Substitution

2. Given:  $a \parallel b$

Prove:  $m\angle 9 + m\angle 14 = 180^\circ$

Statements	Reasons
1. $a \parallel b$	1. Given
2. $m\angle 9 + m\angle 11 = 180^\circ$	2. Linear Pair Postulate
3. $m\angle 11 = m\angle 14$	3. Alternate Interior $\angle$ 's
4. $m\angle 9 + m\angle 14 = 180^\circ$	4. Substitution prop



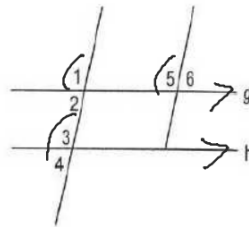
4. Given:  $g \parallel h$ ;  $\angle 1 \cong \angle 5$

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

Statements

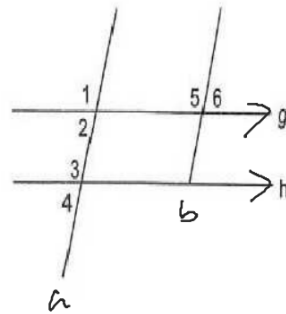
Reasons

- |                                                |                             |
|------------------------------------------------|-----------------------------|
| 1) $g \parallel h$ ; $\angle 1 \cong \angle 5$ | 1) Given                    |
| 2) $\angle 1 \cong \angle 3$                   | 2) Corresponding $\angle$ s |
| 3) $\angle 5 \cong \angle 3$                   | 3) Substitution prop        |



5. Given:  $g \parallel h$ ;  $\angle 6$  &  $\angle 3$  are supplementary

Prove:  $\angle 6 \cong \angle 2$



Statements	Reasons
1) $g \parallel h$ ; $\angle 6$ & $\angle 3$ are Supp	1) Given
2) $\underline{m\angle 6 + m\angle 3 = 180}$	2) Def of Supp $\angle$ 's
3) $\angle 2$ & $\angle 3$ are Supp	3) Same-Side Interior
4) $\underline{m\angle 2 + m\angle 3 = 180}$	4) Def of Supp $\angle$ 's
5) $m\angle 2 + \cancel{m\angle 3} = m\angle 6 + \cancel{m\angle 3}$	5) Substitution prop
6) $m\angle 2 = m\angle 6$	6) Subtraction prop

