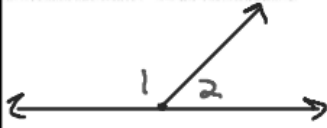


Proofs Using Lines Parallel



Linear Pair Postulate

$$m\angle 1 + m\angle 2 = 180$$

Definition of Perpendicular Lines.



Lines that intersect to form Right angles
Right Angle

Angle that measures 90°

All Right angles are \cong .

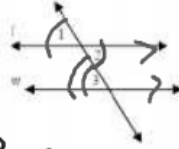
Substitution property
Replace equal values.

Parallel Lines Proof Worksheet

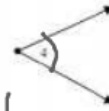
Name _____

Write a 2 column or flow proof on your own paper.

1. Given: $l \parallel m$; $\angle 2 \cong \angle 4$
Prove: $\angle 4 \cong \angle 3$



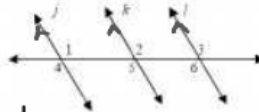
2. Given: $l \parallel m$; $\angle 1 \cong \angle 4$
Prove: $\angle 3 \cong \angle 4$



Statement	Reason
1) $l \parallel m$ $\angle 2 \cong \angle 4$	1) Given
2) $\angle 2 \cong \angle 3$	2) Alternate Interior \angle 's \cong
3) $\angle 4 \cong \angle 3$	3) Substitution prop.

Statement	Reason
1) $l \parallel m$ $\angle 1 \cong \angle 4$	1) Given
2) $\angle 1 \cong \angle 3$	2) Corresponding \angle 's \cong .
3) $\angle 3 \cong \angle 4$	3) Substitution prop.

3. Given: $j \parallel k, k \parallel l$
Prove: $\angle 1 \cong \angle 3$



4. Given: $j \parallel k, k \parallel l$
Prove: $\angle 1 \cong \angle 6$

Statement	Reason
1) $j \parallel k, k \parallel l$	1) Given
2) $\angle 1 \cong \angle 2$	2) Corresponding \angle 's \cong
3) $\angle 2 \cong \angle 3$	3) Corresponding \angle 's \cong
4) $\angle 1 \cong \angle 3$	4) Substitution prop.