

# L-I-N-E-S LAB

Names \_\_\_\_\_

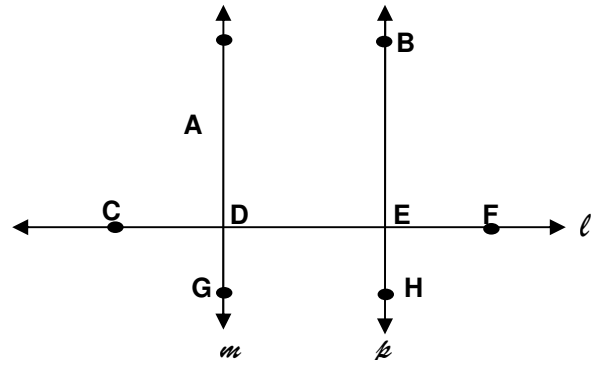
Visit each station, in any order, with your group.  
Check in with the teacher to correct your work before beginning at another station.

L	I	N	E	S

L.

Given:  $m \perp l$  and  $p \perp l$

Prove:  $m \parallel p$



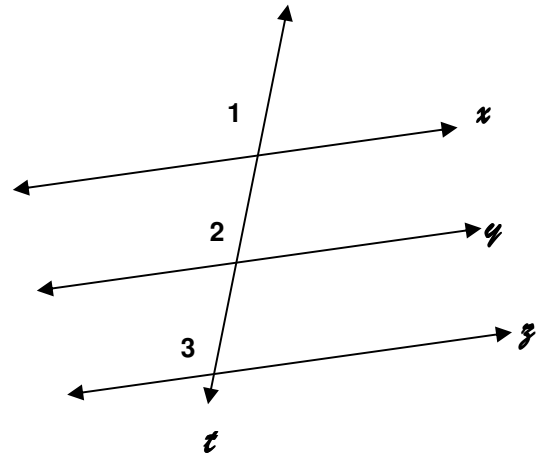
STATEMENTS	REASONS
1) $m \perp l$ and $p \perp l$	
2) Line $l$ is a transversal	
3) $m \angle ADC = 90^\circ$ $m \angle BED = 90^\circ$	
4) $\angle ADC \cong \angle BED$	
5) $m \parallel p$	

**Theorem:**

1.

Given:  $x \parallel z$  and  $y \parallel z$ , and  $t$  is a transversal to all 3 lines

Prove:  $x \parallel y$



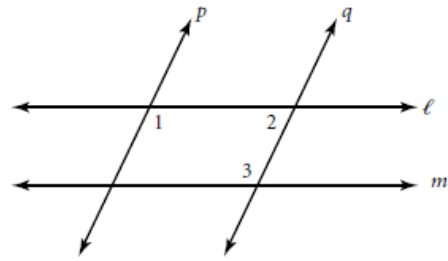
STATEMENTS	REASONS
1) $x \parallel z$ and $y \parallel z$ , and $t$ is a transversal	
2) $\angle 1 \cong \angle 3$ and $\angle 2 \cong \angle 3$	
3) $\angle 1 \cong \angle 2$	
4) $x \parallel y$	

**Theorem:**

N.

Given:  $m\angle 1 = m\angle 3$   
 $p \parallel q$

Prove:  $\ell \parallel m$

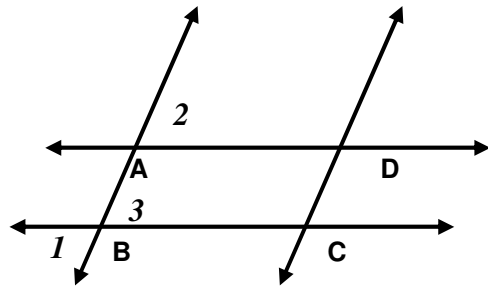


STATEMENTS	REASONS
1) _____	
2) $\angle 1$ and $\angle 2$ are supplementary	
3) $m\angle 1 + m\angle 2 = 180^\circ$	
4) _____	
5) $m\angle 2 + m\angle 3 = 180^\circ$	
6) $\angle 2$ and $\angle 3$ are supplementary	
7) _____	

E.

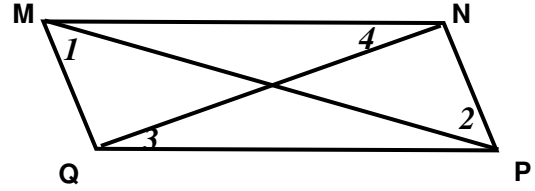
Given:  $\angle 1 \cong \angle 2$   
 $\angle 3$  and  $\angle BCD$  are supplementary

Prove: ABCD is a parallelogram



STATEMENTS	REASONS
1) $\angle 1 \cong \angle 2$	
2) $\overleftrightarrow{AD} \parallel \overleftrightarrow{BC}$	
3) _____	
4) $\overleftrightarrow{AB} \parallel \overleftrightarrow{DC}$	
5) _____	

# S.



Given:  $\angle 1 \cong \angle 2$ ;  $\angle 3 \cong \angle 4$

Prove: MNPQ is a parallelogram

STATEMENTS	REASONS
1) $\angle 1 \cong \angle 2$	
2) $\overline{MQ} \parallel \overline{NP}$	
3) _____	
4) $\overline{MN} \parallel \overline{QP}$	
5) _____	

\*\*Additional Question: If  $m\angle 1 = m\angle MPQ$ , MNPQ would be a \_\_\_\_\_.

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