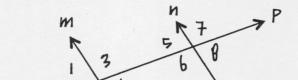
# GEOMETRY: TRANSVERSAL PROOFS (CHAPTER 3.3)

### ALTERNATE INTERIOR ANGLES THEOREM

Given: Line m is parallel to line n; Line p is a transversal

1

Prove:  $\angle 3 \cong \angle 6$ 

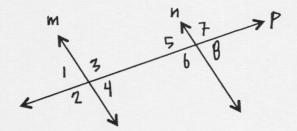


Statement	Reason
	,

### ALTERNATE EXTERIOR ANGLES THEOREM

Given: Line m is parallel to line n; Line p is a transversal

Prove:  $\angle 1 \cong \angle 8$ 



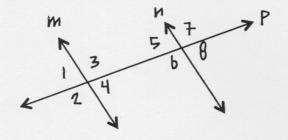
Statement	Reason	

# SAME-SIDE INTERIOR ANGLES THEOREM

Given: Line m is parallel to line n;

Line p is a transversal

Prove:  $m \angle 3 + m \angle 5 = 180^{\circ}$ 

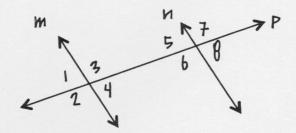


Statement	Reason

# SAME-SIDE EXTERIOR ANGLES THEOREM

Given: Line m is parallel to line n; Line p is a transversal

Prove:  $m \angle 2 + m \angle 8 = 180^{\circ}$ 



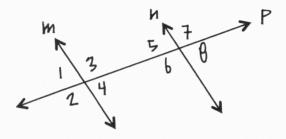
Statement	Reason

# GEOMETRY: CONVERSES OF TRANSVERSAL PROOFS (CHAPTER 3.4)

### CONVERSE OF ALTERNATE INTERIOR ANGLES THEOREM

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

Prove: Line m is parallel to line n

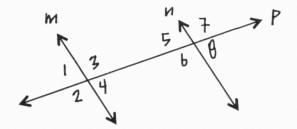


Statement	Reason	

#### CONVERSE OF ALTERNATE EXTERIOR ANGLES THEOREM

Given:  $\angle 1 \cong \angle 8$ 

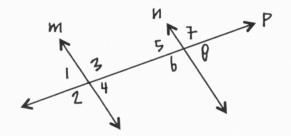
Prove: Line m is parallel to line n



Statement	Reason	

## CONVERSE OF SAME-SIDE INTERIOR ANGLES THEOREM

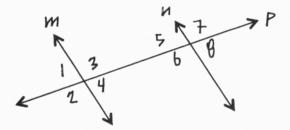
Given:  $\angle 3$  and  $\angle 5$  are supplementary Prove: Line m is parallel to line n



Statement	Reason

#### CONVERSE OF SAME-SIDE EXTERIOR ANGLES THEOREM

Given:  $\angle 2$  and  $\angle 8$  are supplementary Prove: Line m is parallel to line n



Statement	Reason