

3 - 5

Proving Lines are Parallel

Proving Lines Parallel

Parallel lines with a transversal create many pairs of congruent and supplementary angles, such as;

Alternate Exterior

Alternate Interior

Corresponding

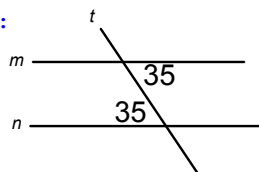
Consecutive Interior

The converse of these Theorems can be used to prove that certain lines are parallel

CONVERSE of ALTERNATE INTERIOR ANGLE THEOREM

*If Alternate Interior Angles are congruent,
then the two lines that create these angles are parallel*

GIVEN:

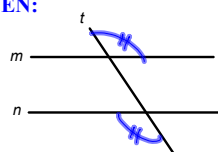


CONCLUDE:

CONVERSE of ALTERNATE EXTERIOR ANGLE THEOREM

*If Alternate Exterior Angles are congruent,
then the two lines that create these angles are parallel*

GIVEN:

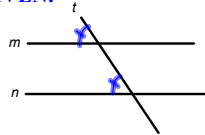


CONCLUDE:

CONVERSE of CORRESPONDING ANGLE POSTULATE

If Corresponding Angles are congruent, then the two lines that create these angles are parallel

GIVEN:



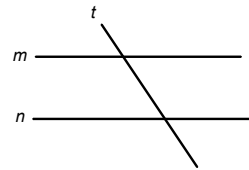
CONCLUDE:

CONVERSE of CONSECUTIVE INTERIOR ANGLE THEOREM

If Consecutive Interior Angles are supplementary, then the two lines that create these angles are parallel

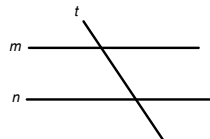
GIVEN:

35
145



CONCLUDE:

Given: $\angle 1$ and $\angle 5$ are supplementary
Prove: $n \parallel m$



GIVEN: $r \parallel s$; $\angle 5 \cong \angle 6$

PROVE: $n \parallel m$

STATEMENTS	REASONS

