

Reteaching 3-2

Proving Lines Parallel

OBJECTIVE: Writing flow proofs

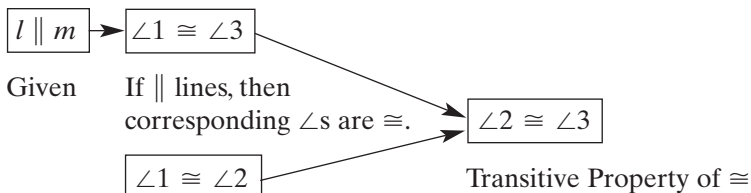
MATERIALS: None

Example

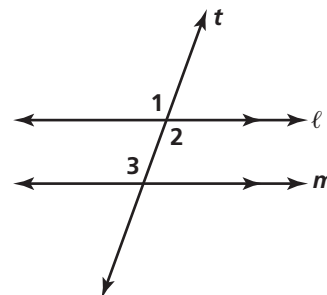
Write a flow proof for Theorem 3-1: If two parallel lines are cut by a transversal, then alternate interior angles are congruent.

Given: $l \parallel m$

Prove: $\angle 2 \cong \angle 3$



Vertical angles are \cong .



Exercises

Complete a flow proof for each.

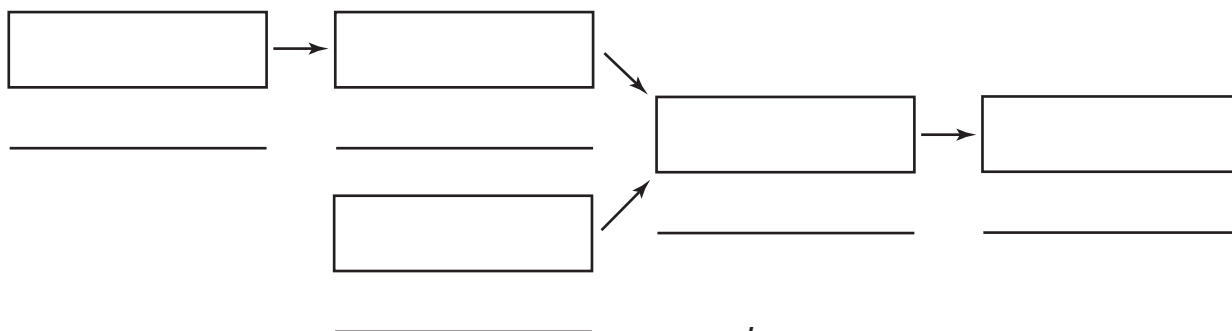
1. Complete the flow proof for Theorem 3-2 using the following steps. Then write the reasons for each step.

- a. $\angle 2$ and $\angle 3$ are supplementary. b. $\angle 1 \cong \angle 3$ c. $l \parallel m$
 d. $m\angle 1 + m\angle 2 = 180$ e. $m\angle 3 + m\angle 2 = 180$

Theorem 3-2: If two parallel lines are cut by a transversal, then same-side interior angles are supplementary.

Given: $l \parallel m$

Prove: $\angle 2$ and $\angle 3$ are supplementary.



2. Write a flow proof for the following:

Given: $\angle 2 \cong \angle 3$

Prove: $a \parallel b$

