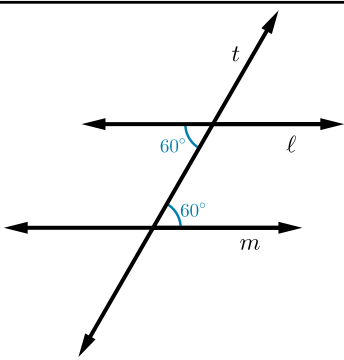
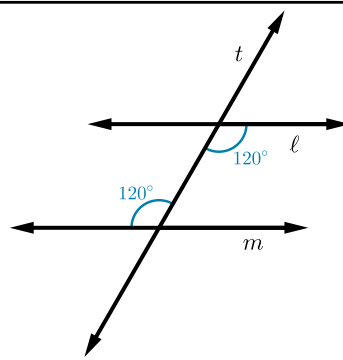
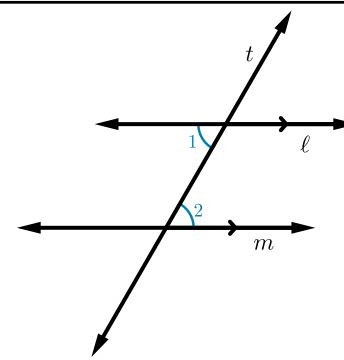


Alternate Interior Angles Converse

Examples & Non-Examples

Example	Example	Non-Example
 Since these are alternate interior angles, and they are congruent, then lines l and m must be parallel.	 Since these are alternate interior angles, and they are congruent, then lines l and m must be parallel.	 Since lines l and m are parallel, then angles 1 and 2 are congruent because they are alternate interior angles.

Definition

The **Alternate Interior Angles Converse** states:

“If two lines are cut by a transversal and the alternate interior angles are congruent, then the lines are parallel.”

In other words:

- If two alternate interior angles are **equal in measure**,
- Then the two lines being crossed by the transversal are **parallel**.

Why it's important:

This converse is commonly used in geometric **proofs** to **prove that two lines are parallel** based on angle relationships.

