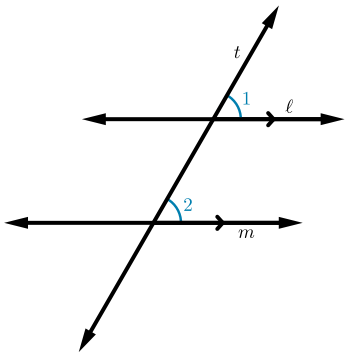
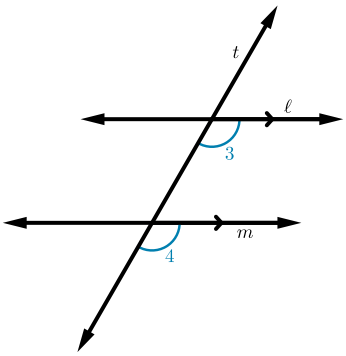
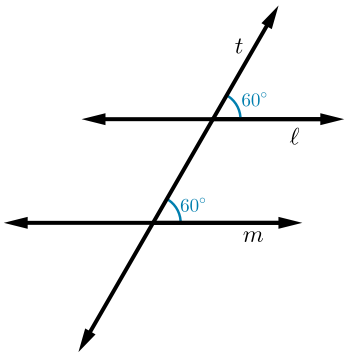
# Corresponding Angles Theorem

## Examples & Non-Examples

| Example | Example | Non-Example |
|---|---|---|
|  |  |  |
| *Since lines l and m are parallel, then angles 1 and 2 are congruent because they are corresponding angles.* | *Since lines l and m are parallel, then angles 3 and 4 are congruent because they are corresponding angles.* | *Since these are corresponding angles, and they are congruent, then lines l and m must be parallel.* |

## Definition

The **Corresponding Angles Theorem** states:

> "If two parallel lines are cut by a transversal, then each pair of corresponding angles is congruent."

### In simpler terms:

- When a **transversal** crosses two **parallel lines**,
- The angles that are in the **same relative position** at each intersection point
- Are **equal in measure**.

### Example:

If line $l \| \ \| m$, and transversal $t$ crosses them, then:

- The angle **above line** $l$ and to the **right of the transversal**
- Is congruent to the angle **above line** $m$ and to the **right of the transversal**

These are **corresponding angles**, and by the theorem, **they are congruent**.