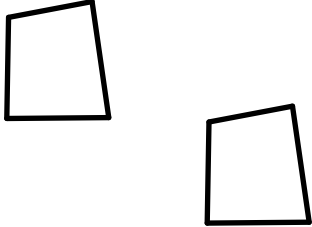
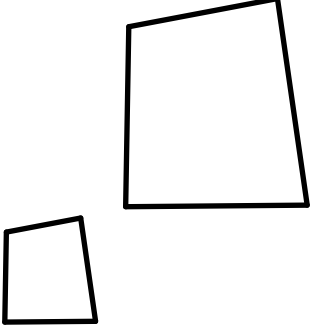
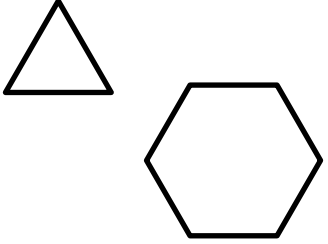


# Transformation

## Examples & Non-Examples

Example	Example	Non-Example
		

## Definition

A **transformation** is a rule or operation that **moves or changes a figure** on a plane to produce a **new figure** called the **image**.

### Key Points:

- The original figure is called the **preimage**.
- A transformation can change the figure's **position, orientation, size, or shape** (depending on the type).
- Common types of transformations include:
  - **Translation** (slide)
  - **Reflection** (flip)
  - **Rotation** (turn)
  - **Dilation** (resizing)
- Some transformations (translations, reflections and rotations) are **rigid motions** — they **preserve size and shape**.

### Example:

Reflecting a triangle over the  $y$ -axis is a transformation that flips the triangle to the other side of the axis, creating a mirror image.

