

Section 6 Concept Unit Grade 4

ACTIVITY 1 Introducing Transformations

Materials:

Blackline Masters: *Transformations 1A* (2 per page), 1 grid per student
 Transformations 1B, 1 per student

Transparencies: *Transformations 1A - 1B*

Pattern block trapezoids

Pencils

1. Introduce the term *transformation*.
 movement of a geometric figure

2. Using *Transformations 1A - 1B*, work with the students following this procedure:
 - a. Using *Transformations 1A*, place a pattern block trapezoid in the original position as outlined in the following diagrams.
 Instruct students to place his/her trapezoid in this position.

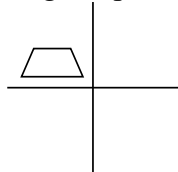
 - b. Model the transformation.
 Instruct students to do the transformation as modeled.

 - c. Record the transformation on *Transformations 1B*.

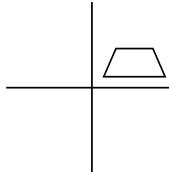
 - d. After recording, discuss that even though the trapezoid has changed positions, it is still congruent (same size and same shape).

Translation *a transformation in which only the position of the figure is changed*

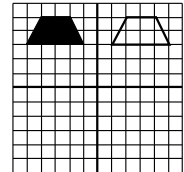
A original position



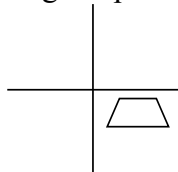
translate horizontally



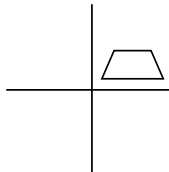
record



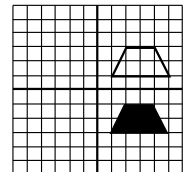
B original position



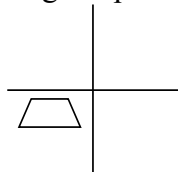
translate vertically



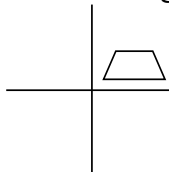
record



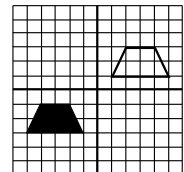
C original position



translate diagonally



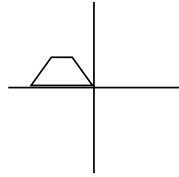
record



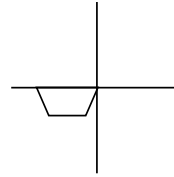
Reflection

a transformation in which a figure is moved to a symmetrical position on the other side of a point or line

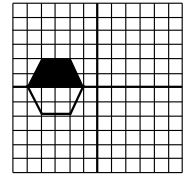
D original position



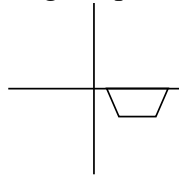
reflect top to bottom



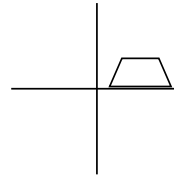
record



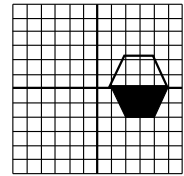
E original position



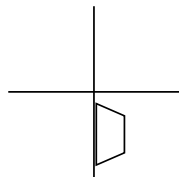
reflect bottom to top



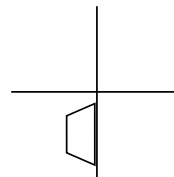
record



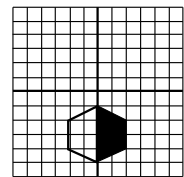
F original position



reflect right to left



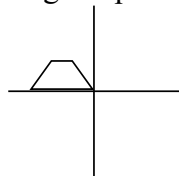
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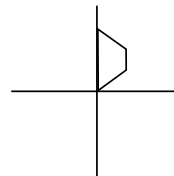
Rotation

a transformation in which a figure is moved about a fixed point

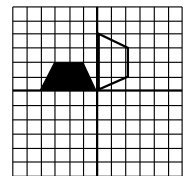
G original position



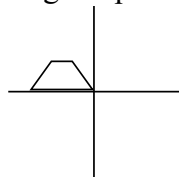
rotate one turn clockwise



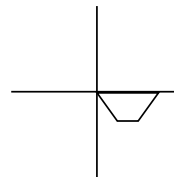
record



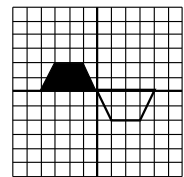
H original position



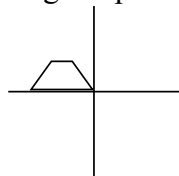
rotate two turns clockwise



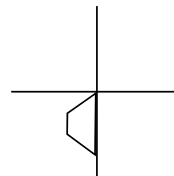
record



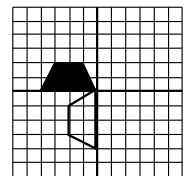
I original position



rotate three turns clockwise



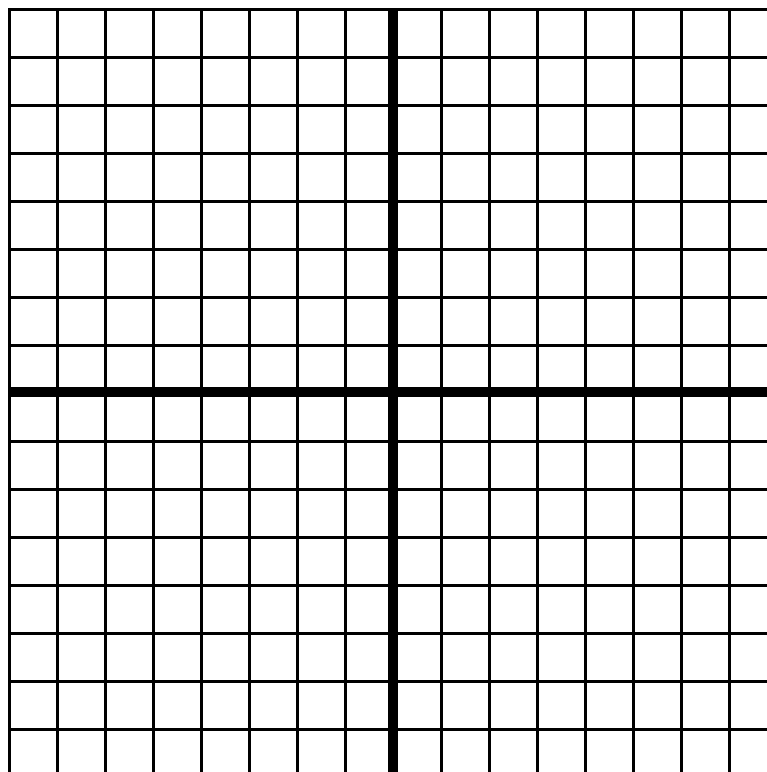
record



3. Practice: *Transformations 1B*, 1

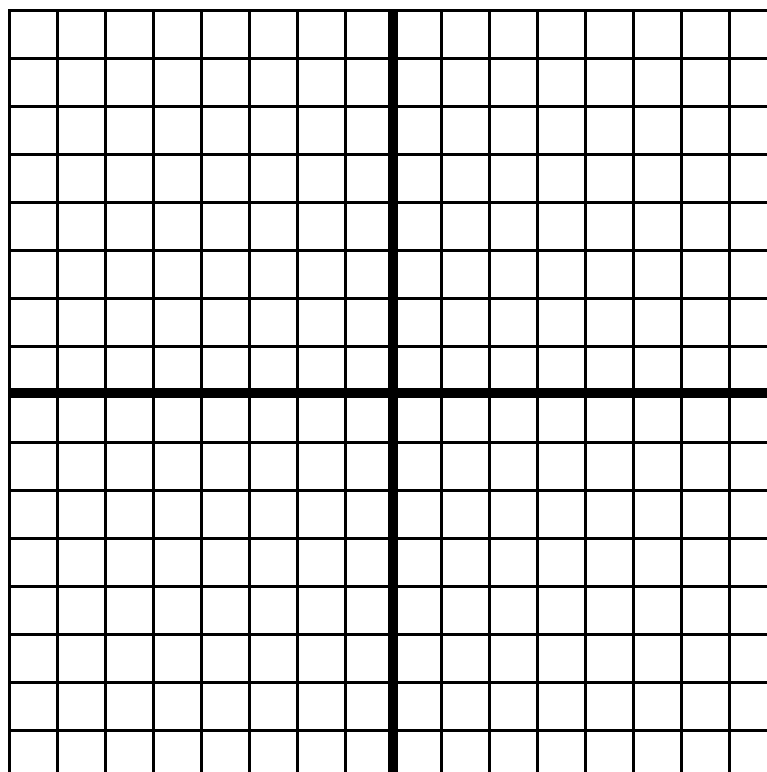
Name _____

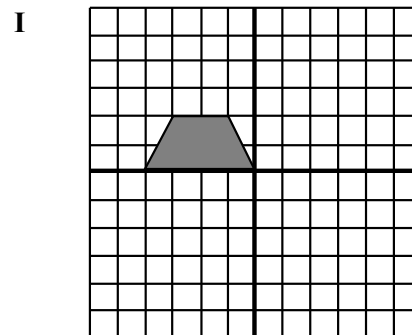
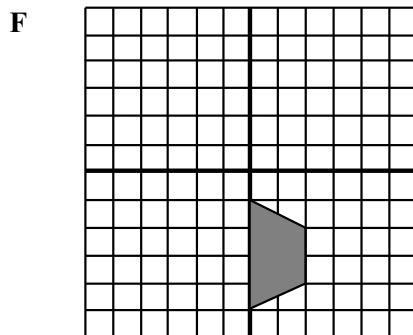
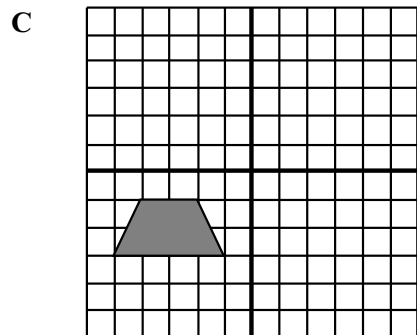
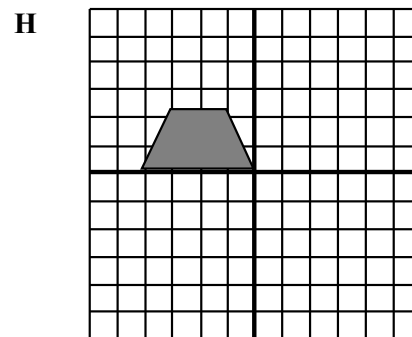
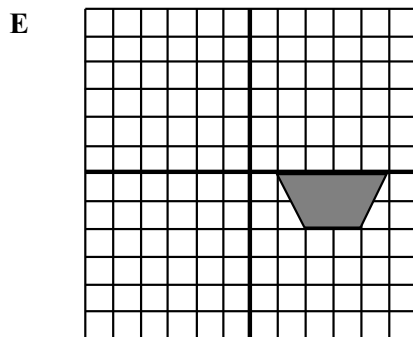
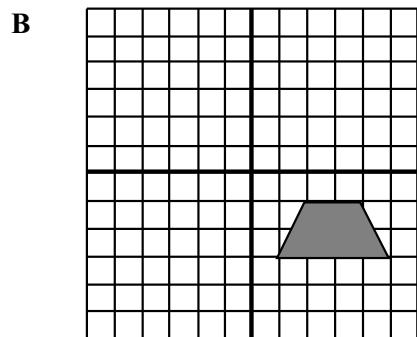
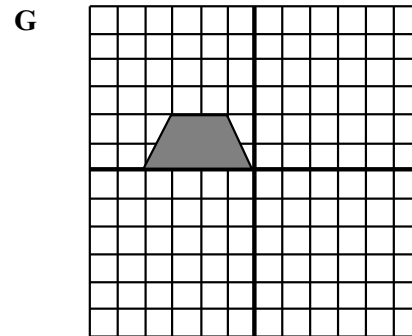
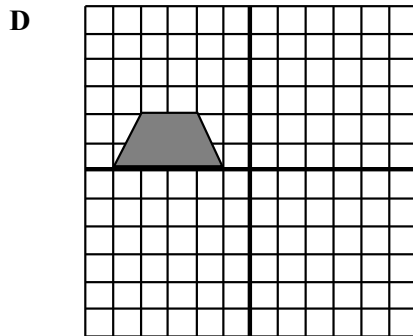
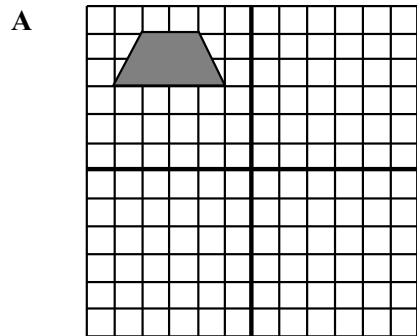
Transformations 1A



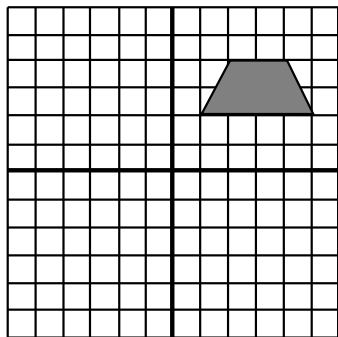
Name _____

Transformations 1A

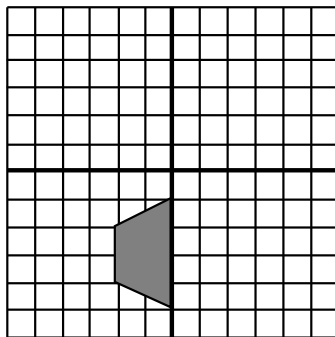




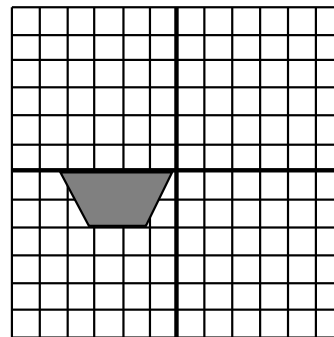
1 Translation



Reflection

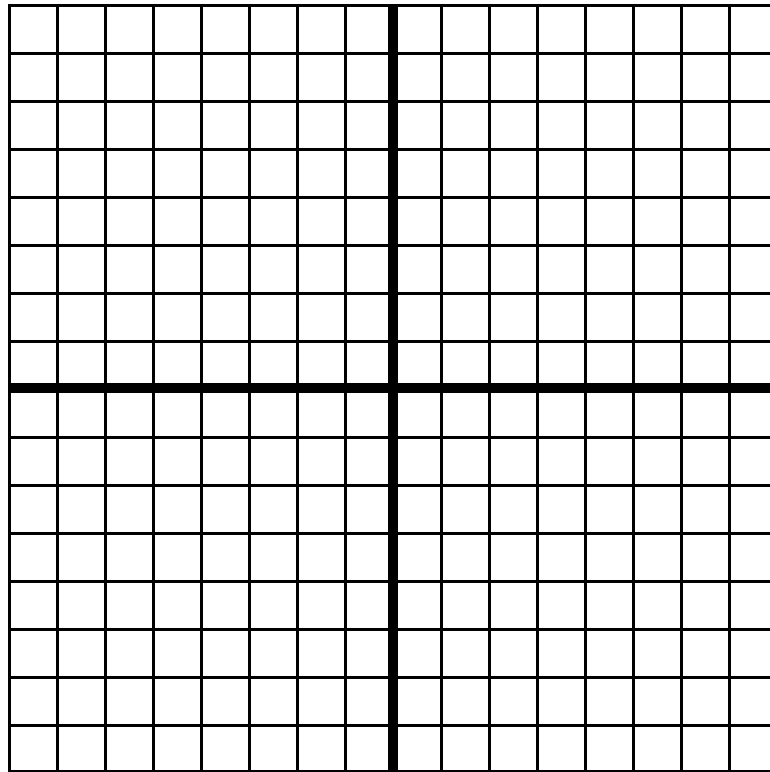


Rotation



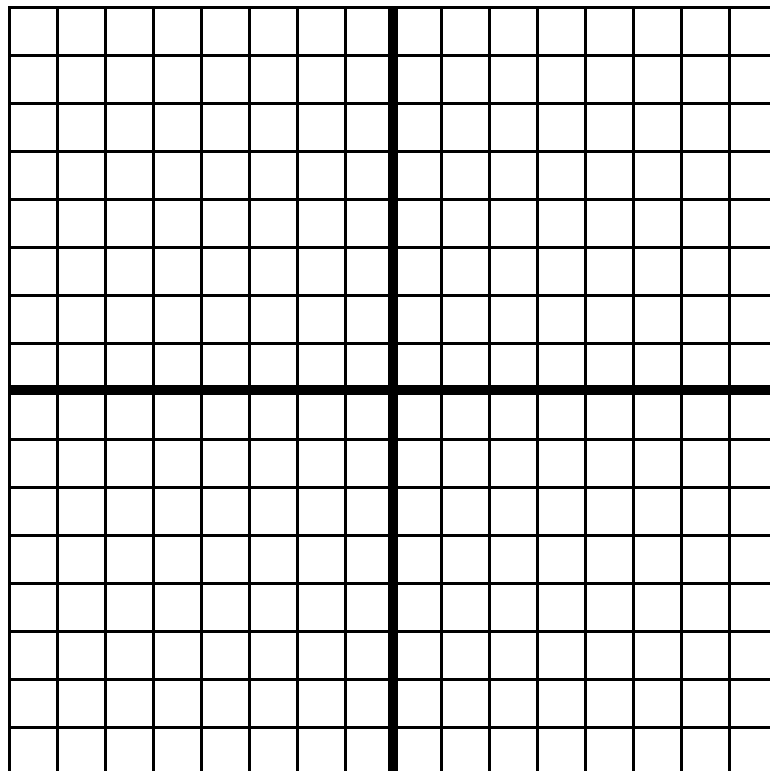
Nombre _____

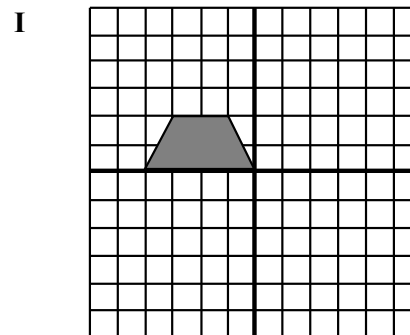
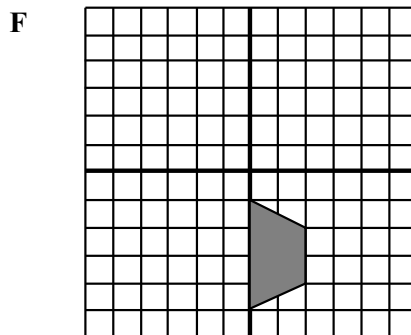
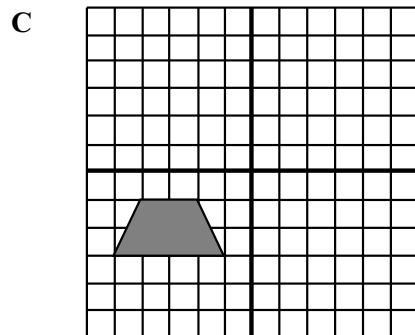
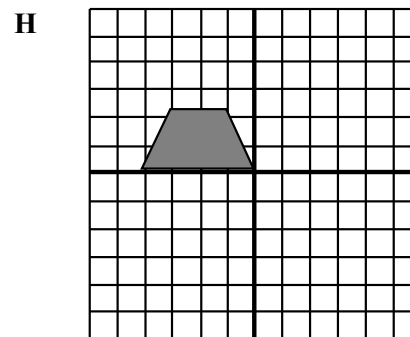
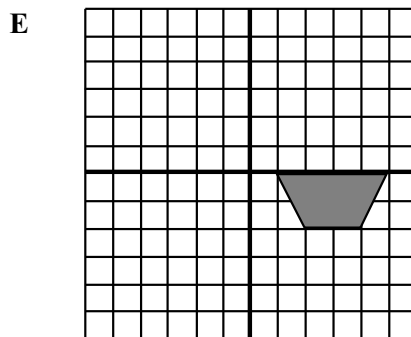
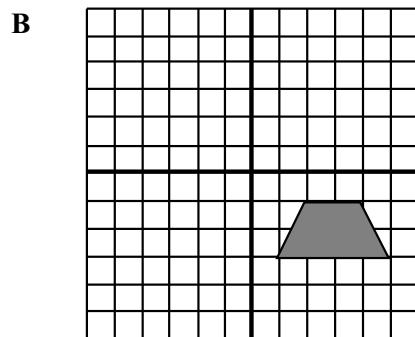
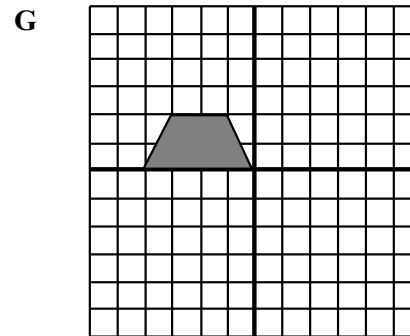
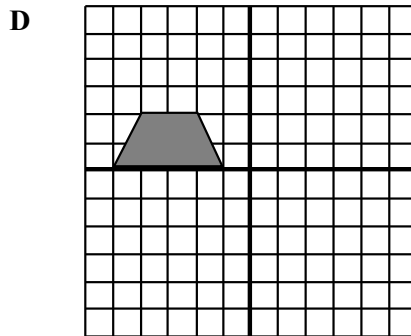
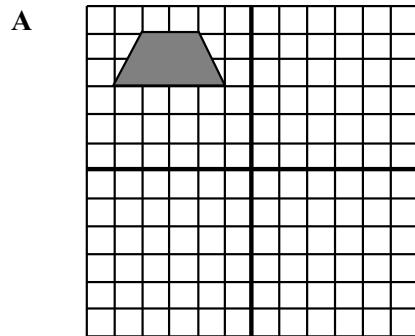
Transformaciones 1A



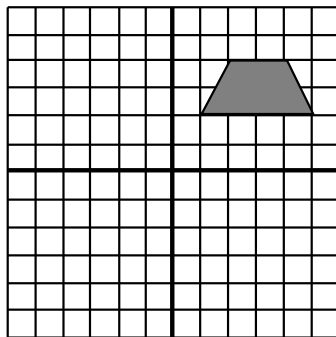
Nombre _____

Transformaciones 1A

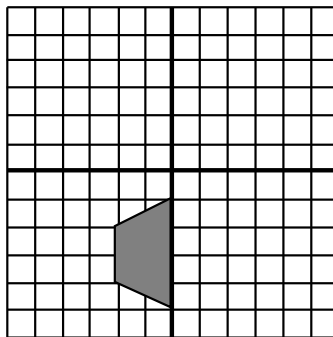




1 **traslación**



reflexión



rotación

