Lesson 3 Summary

When a figure is on a grid, we can use the grid to describe a transformation. For example, here is a figure and an image of the figure after a move.

* Grid paper is good for rotations that are multiples of $90^\circ (90^\circ, 180^\circ, 270^\circ)$

Quadrilateral $ABCD$ is translated 4 units to the right and 3 units down to the position of quadrilateral $A'B'C'D'$.

Prime notation - shows the image ex: $A$ and $A'$ are corresponding points

Graph a translation by moving each point in the shape the same amount & direction. Connect your points to make image ex: move each point down 3 and right 4

A second type of grid is called an isometric grid. The isometric grid is made up of equilateral triangles. The angles in the triangles all measure 60 degrees, making the isometric grid convenient for showing rotations of 60 degrees.

* Isometric grids are good for rotations that are multiples of $60^\circ (60^\circ, 120^\circ, 180^\circ, 240^\circ, 300^\circ)$

Here is quadrilateral $KLMN$ and its image $K'L'M'N'$ after a 60-degree counterclockwise rotation around a point $P$.

Graph a rotation by tracing the shape & grid lines on a transparency (label the points) thru the point of rotation.

* rotate transparency in the direction and amount of degrees

* shape will move to where image shape will be, copy it onto your page

Steps for graphing a reflection:

* count how many units the point is to the line, count that many units on the other side of the line and make image point

* do with each point of shape

* connect the points to make image shape