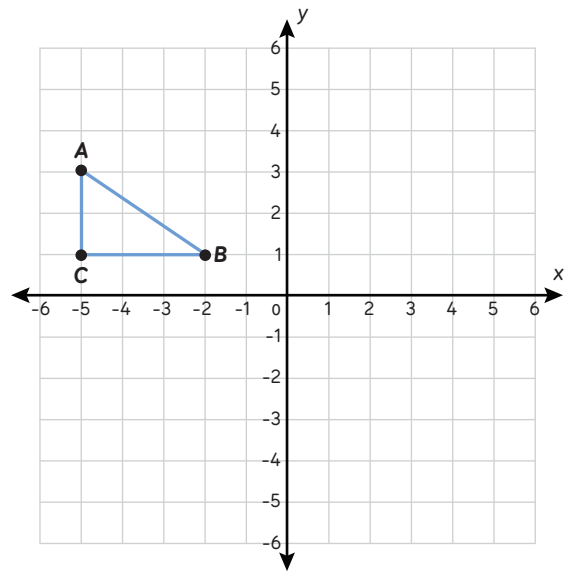# Sequences of Congruence Transformations

Translations, reflections, and rotations are **congruence transformations**. If a figure goes through a sequence of congruence transformations, the resulting figure and the original figure are congruent.

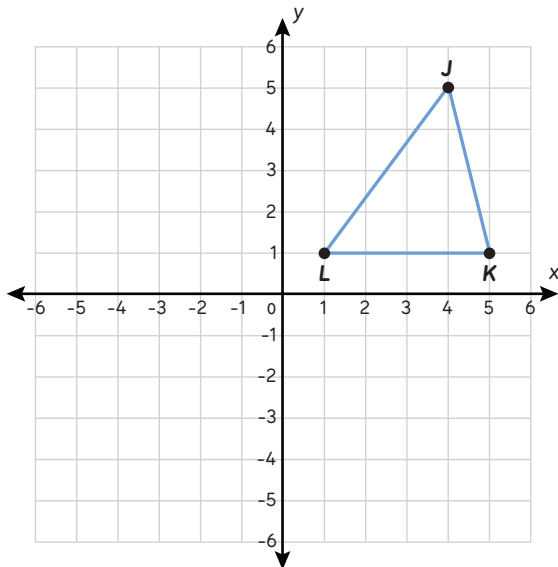**Try it!** Graph each transformed figure and label its vertices. The first problem has been done for you.

Graph the image of △FGH after a rotation 90° counterclockwise around the origin and a reflection over the y-axis.
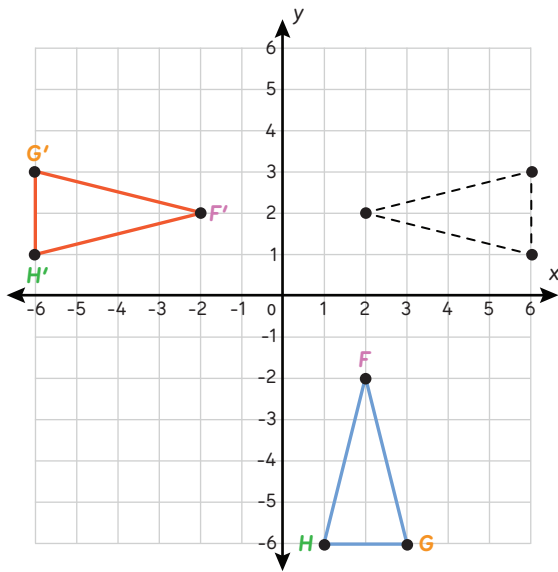
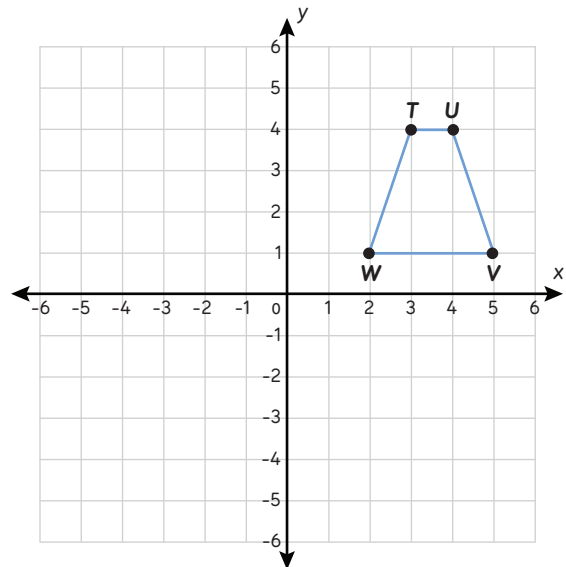Graph the image of △ABC after a reflection over the x-axis and a translation 4 units right.

Graph the image of △JKL after a rotation 90° counterclockwise around the origin and a translation 5 units down.

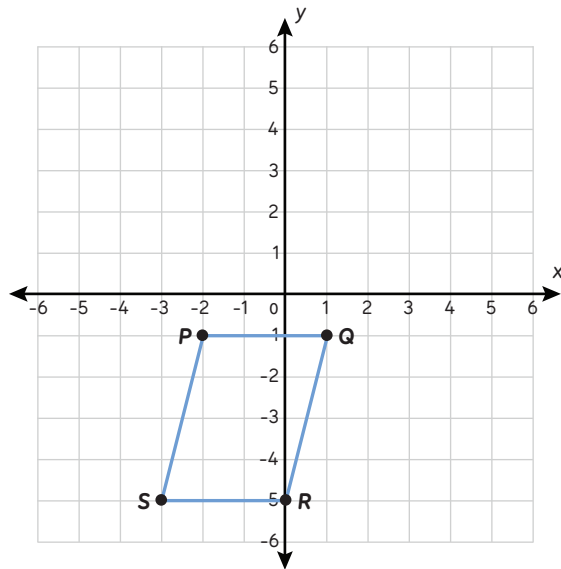Graph the image of trapezoid TUVW after a translation 2 units left and a reflection over the y-axis.
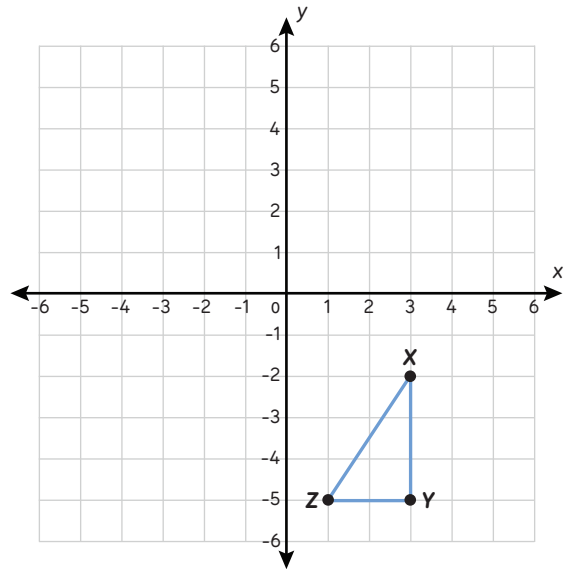
Sequences of Congruence Transformations

**Keep going!** Graph each transformed figure and label its vertices.

Graph the image of parallelogram *PQRS* after a translation 3 units left and a rotation 180° counterclockwise around the origin.

Graph the image of △*XYZ* after a reflection over the line *x* = −1 and a rotation 90° counterclockwise around the origin.

Graph the image of △*LMN* after a translation 3 units up and 7 units right and a reflection over the line *y* = −2.
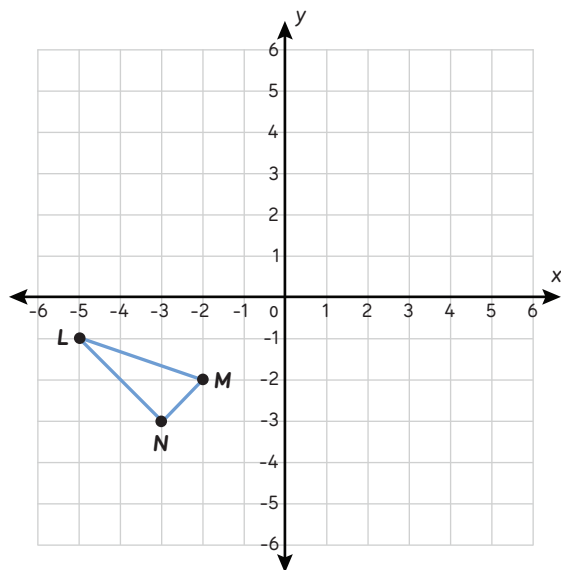
Graph the image of trapezoid *BCDE* after a rotation 270° counterclockwise around the origin and a translation 2 units up and 4 units right.

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