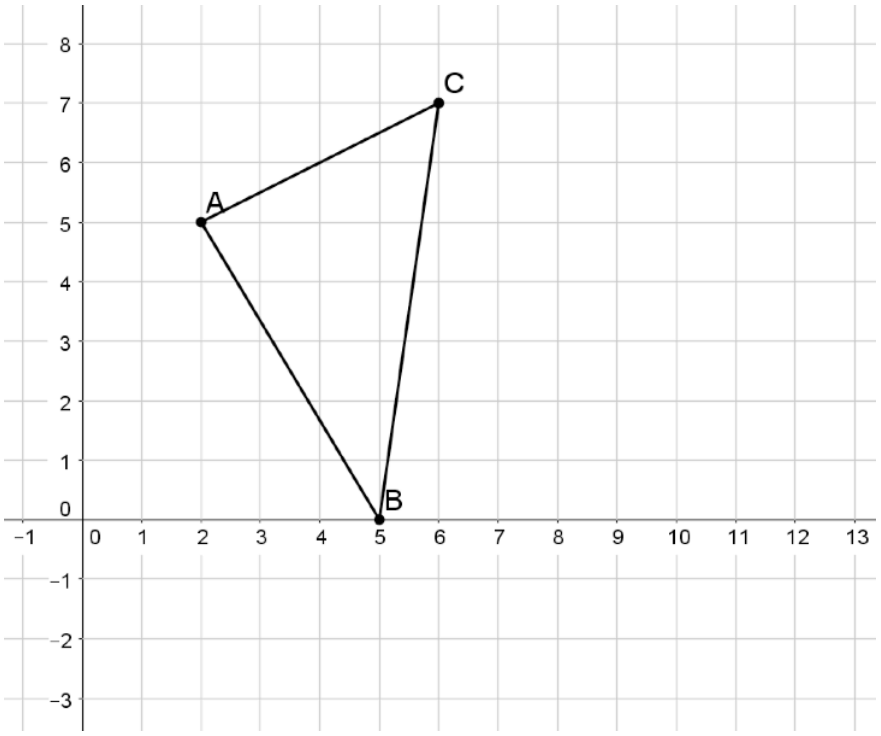
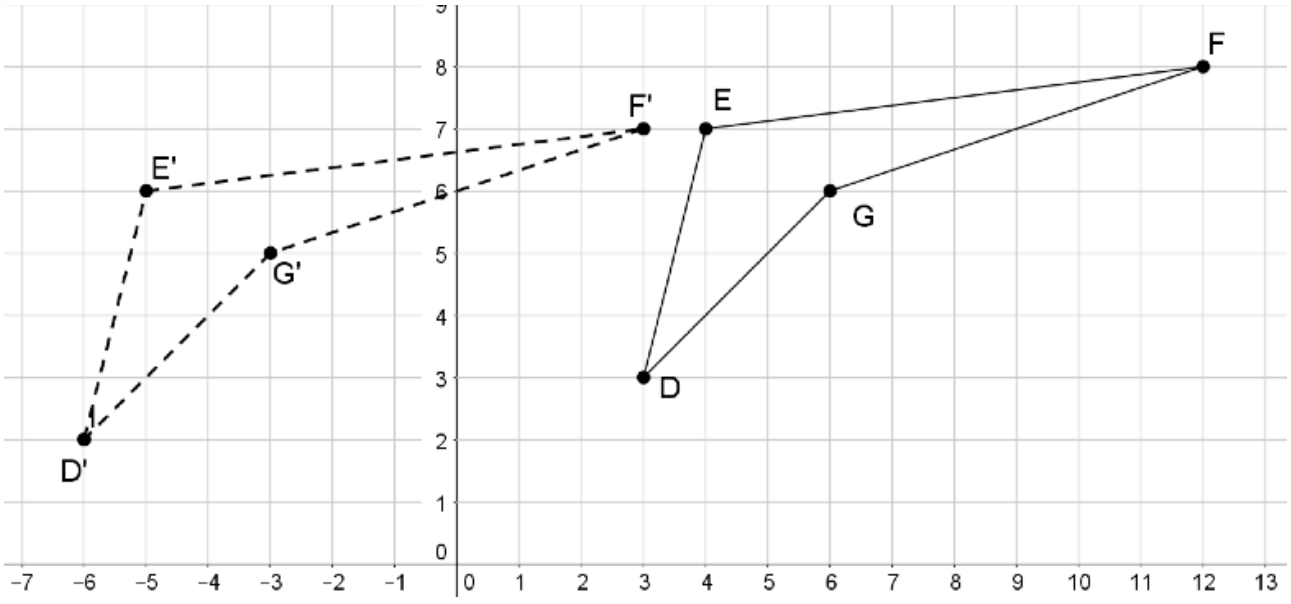
Geometry – Rigid Motion Transformations **Name** _____
10d HW: Rigid Motion Transformations and Congruence **Period** ____ **Date** _____

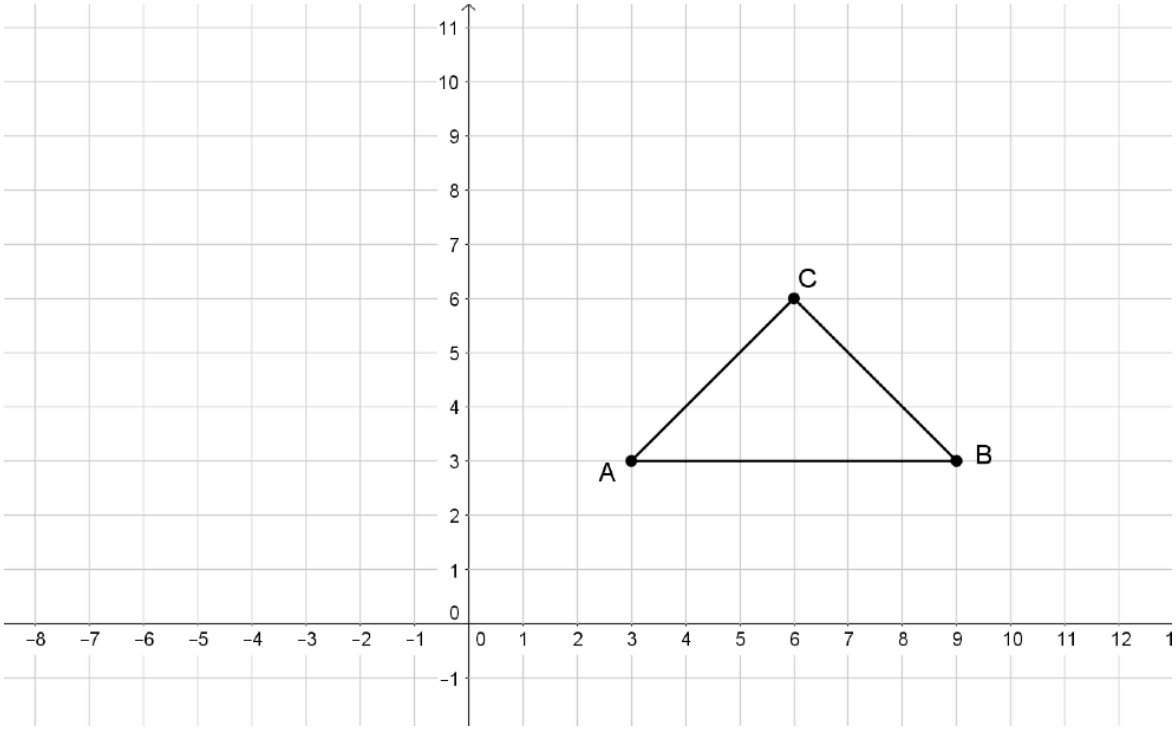
1. Draw the image of ΔABC under the translation T defined by T(x, y) = (x + 3, y – 2), then a rotation of 180° about point (4, 2). Label the resulting image $\Delta A'B'C'$ such that $\Delta ABC \cong \Delta A'B'C'$.



2. In the coordinate plane below, $DEFG \cong D'E'F'G'$. Describe in words **and** represent symbolically the translation T that maps *DEFG* onto *D'E'F'G'*.



3. Rotate ΔABC 90° clockwise about point B, followed by the translation T defined by $T(x, y) = (x - 1, y - 2)$, and finally a reflection over the $x = 3$. Label the resulting image $\Delta A'B'C'$ such that $\Delta ABC \cong \Delta A'B'C'$.



4. Show that $\Delta ABC \cong \Delta A'B'C''$ by defining a sequence of rigid motion transformations that moves ΔABC to $\Delta A'B'C'$.