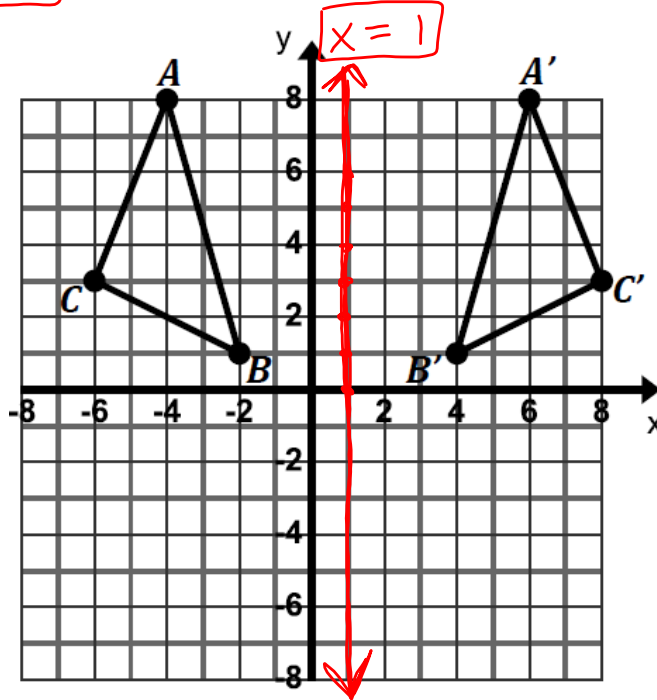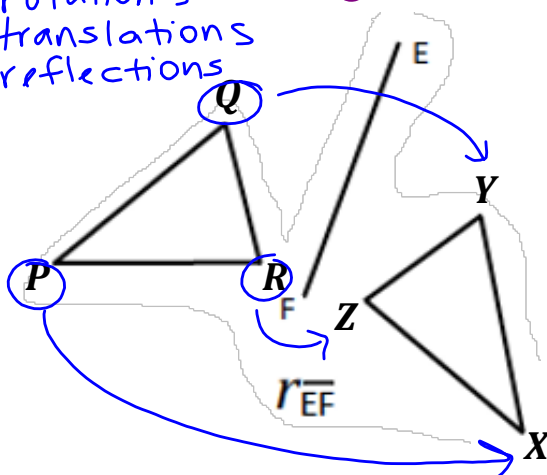DO NOW
Identify and write the equation of the line of
reflection for the triangles graphed below

$x = 1$

Two figures are **congruent** if and only if there exists
one, or more, rigid motions which will map one
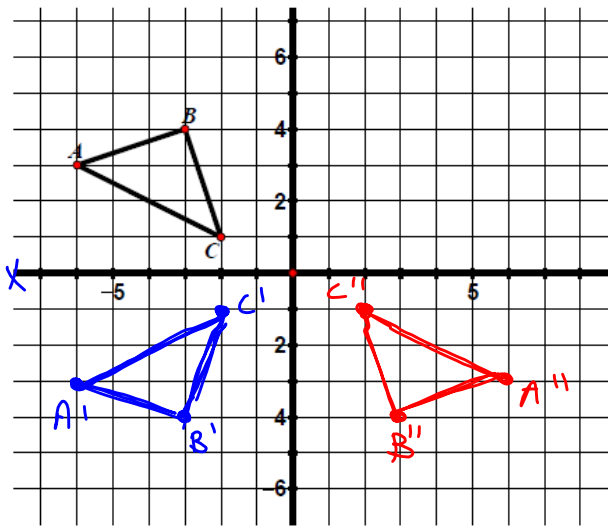figure onto the other.

rotations
translations
reflections

$$\triangle PQR \cong \triangle XYZ$$

because rigid motions map
point P to point X, point Q to
point Y and point R to point Z.

$r_{\overline{EF}}$

**Rigid motions map segments onto segments of equal length
and angles onto angles of eqal measure**
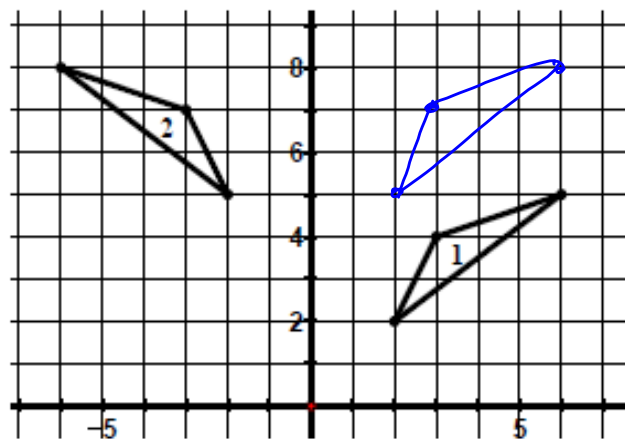
Δ   has been plotted below.

a. Reflect Δ   over the x-axis and label the image ′ ′ ′.

b. Reflect Δ ′ ′ ′ over the y-axis and label the image ″ ″ ″.

c. What **one** transformation is the same as this double reflection?
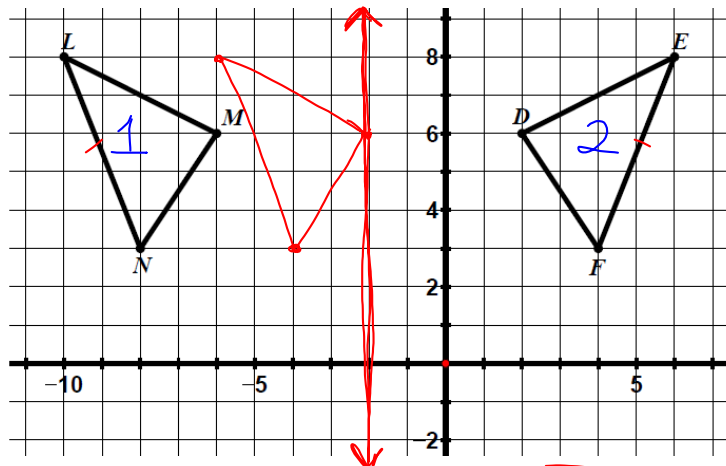
Rotation 180°

Describe a sequence of rigid motions that would carry triangle 1 onto triangle 2. Use precise descriptions.

$r_{y\text{-axis}}$ followed by $T_{0,3}$

The two figures below are congruent.

(a) Describe the transformation or sequence of transformations that will carry $\triangle LMN$ onto $\triangle EDF$.
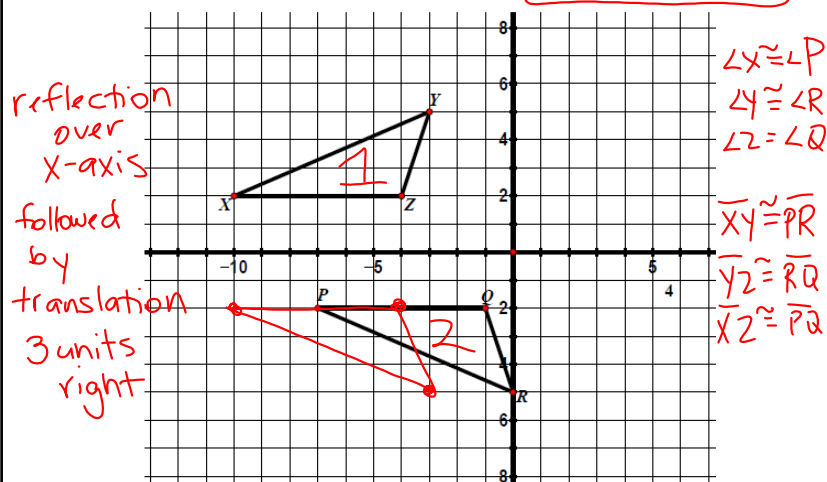

$r_{x=-2}$ OR $r_{y\text{-axis}}$

$T_{-4,0}$

(b) List the congruent corresponding parts

$\angle M \cong \angle D$ $\overline{LN} \cong \overline{EF}$

$\angle L \cong \angle E$ $\overline{LM} \cong \overline{ED}$

$\angle N \cong \angle F$ $\overline{MN} \cong \overline{DF}$

The two figures below are congruent.

(a) Describe the transformation or sequence of transformations that will carry $\triangle XYZ$ onto $\triangle PRQ$.

reflection over x-axis followed by translation 3 units right

$\angle X \cong \angle P$
$\angle Y \cong \angle R$
$\angle Z = \angle Q$

$\overline{XY} \cong \overline{PR}$
$\overline{YZ} \cong \overline{RQ}$
$\overline{XZ} \cong \overline{PQ}$

(b) List the congruent corresponding parts