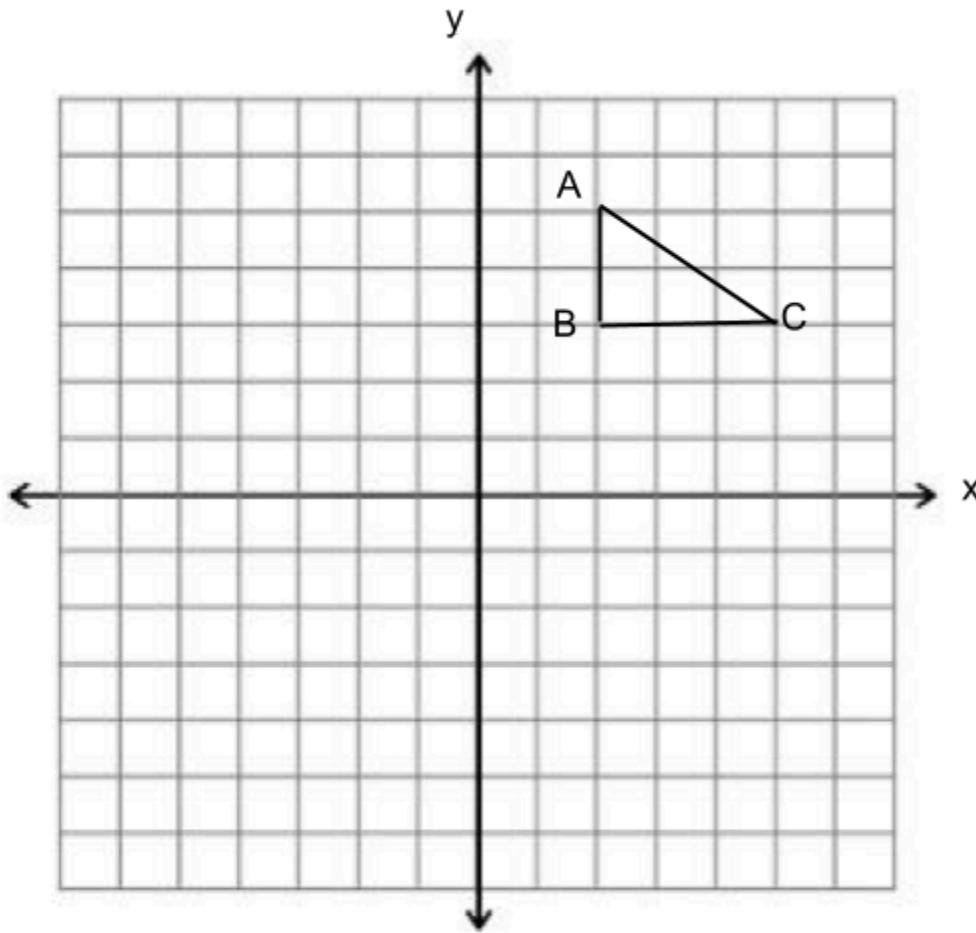


Deriving the Definition of Reflection

Using a Mira or sheet of transparency as a mirror, reflect $\triangle ABC$ over the x-axis, over the y-axis and over the line $y = -x$. Label and map the points of the pre-image to each image.

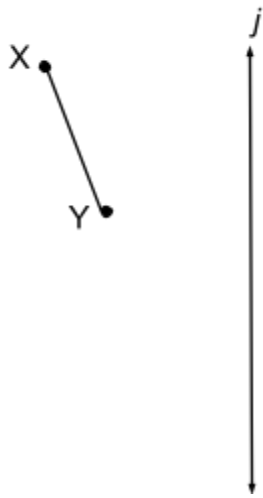


1) What do you notice? Be sure to list everything, even the obvious.

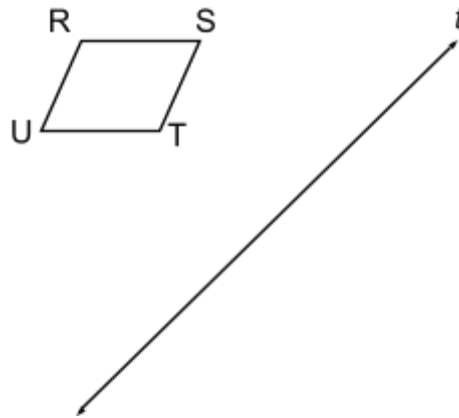
2) Use your observations to create a definition of a reflection.

3) Using the definition you created above, reflect the following figures across the indicated lines.

a) $\overline{XY}$ over j



b) $RSTU$ over t



Check your results with a Mira or sheet of transparency.

a) Are your reflections true reflections? Explain thoroughly.

b) Make any changes or additions that need to be made to your definition and reflect on the changes.