FOLLOW DIRECTIONS: Answer the questions below. Do what is asked of you.


Write the equation of the line of reflection that carries $P$ onto $P^{\prime}$.

Write the equation of the line of reflection that carried $\mathrm{P}^{\prime}$ onto $\mathrm{P}^{\prime \prime}$.

We learned from the activity on replacement page 23 that a double reflection in intersecting lines is equivalent to what single transformation?

Record two specific details about this single transformation for the graph above?


Use a straight edge to connect P and $\mathrm{P}^{\prime}$. Locate the center of segment PP' and indicate the location with a bold point labeled M.

Record the slope of PP :
Record the coordinates of M :
Use a straight edge to draw the perpendicular bisector of $\mathrm{PP}^{\prime}$ and write the equation of this line using pointslope form:

Use a straight edge to connect $\mathrm{P}^{\prime}$ and $\mathrm{P}^{\prime \prime}$.
Locate the center of segment $\mathrm{P}^{\prime} \mathrm{P}^{\prime \prime}$ and indicate the location with a bold point labeled N .

Record the slope of $\mathrm{P}^{\prime} \mathrm{P}^{\prime \prime}$ :
Record the coordinates of N :

Use a straight edge to draw the perpendicular bisector of $P^{\prime} P^{\prime \prime}$ and write the equation of this line using pointslope form:

On the graph locate the intersection of the two perpendicular bisectors. What is the significance of this point?

Describe in detail the single transformation that carries P onto P "? Measure the angle using a protractor.


