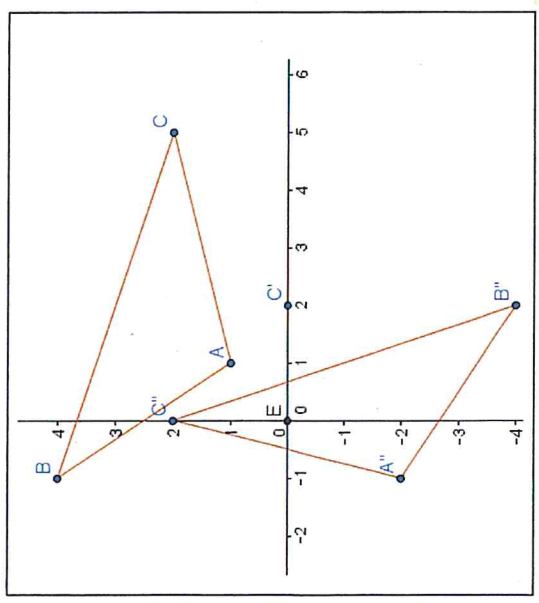


HW #4 take 1/2 sheet graph paper for this 1-5, 7-9

Geometry Homework over transformations and congruence
Includes reflecting across non-axis lines, etc.
For 1-7: On your own paper...write down coordinates, show any work, circle correct answer.

- 1) If $P(x,y) \rightarrow P'(x+3,y-4)$ and P' is $(3,-5)$, what is P ?
- 2) Point A has coordinates $(-2,-4)$ and A' has coordinates $(2, -4)$. What is the axis of reflection?
- 3) If point $B(11,5)$ is rotated 270° counter-clockwise, what will be the coordinates of B' ? *around (0,0)*
- 4) If point $C(-5,11)$ is rotated 90° , what will be the coordinates of point C' ?
- 5) If $\triangle CHK$ is translated $(-2,6)$ to create the image $\triangle C'H'K'$, and $\triangle C'H'K'$ is translated $(5,-11)$ to create $\triangle C''H''K''$, what is the single rule that will transform $\triangle CHK$ to $\triangle C''H''K''$?
- 6) Describe a glide reflection as a composition of two transformations.
- 7) What is a rule that will reflect any figure across $y=x$?

For 8-10: You may use graph paper if wanted. Show all work.
8) Polygon $COWB$ has coordinates $C(-5, 2)$, $O(-4,6)$, $W(0,7)$, $B(-1,3)$. What are the coordinates of $C'O'W'B'$ when $COWB$ is reflected across the x-axis and then the y-axis? What single transformation and its rule can give the same result?
9) Reflect $\triangle XYZ$ across $y=2$ to find the vertices of $\triangle X'Y'Z'$. $X(-3,1)$, $Y(1,5)$, $Z(4,0)$
10) Are the following polygons congruent based on the definitions we learned? Justify your reasoning by a series of mappings explained in words (no rules necessary).



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