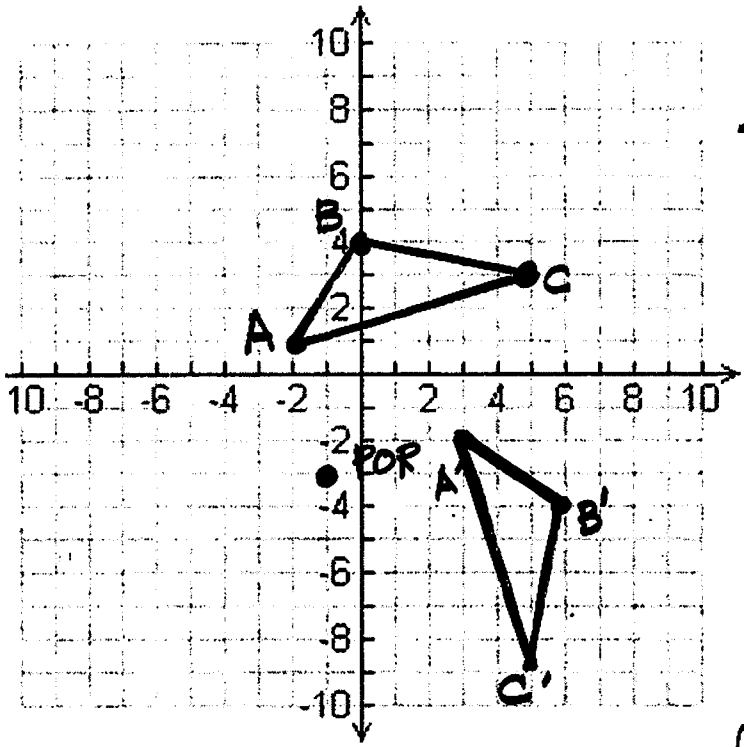
HOW TO WRITE A RULE TO ROTATE ABOUT A POINT (THAT IS NOT THE ORIGIN)



THIS IS A THREE STEP PROCESS WHERE YOU FIRST TRANSLATE THE P.O.R TO THE ORIGIN, THEN PERFORM THE ROTATION, & FINALLY TRANSLATE THE ORIGIN BACK TO THE P.O.R

SO.... TO ROTATE THE TRIANGLE 90° CW ABOUT (-1,-3) THE MATH LOOKS LIKE THIS

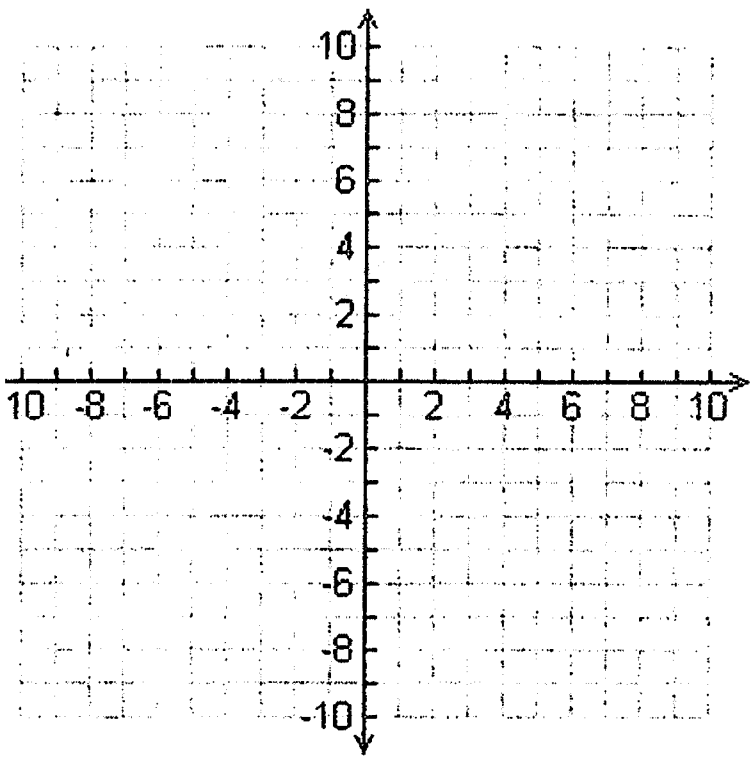
$(x, y) \rightarrow (x+1, y+3)$ MOVE POR RIGHT 1 UP 3

$\rightarrow (y+3, -(x+1))$ SWITCH & MAKE SECOND VALUE OPP.

$\rightarrow (y+3-1, -(x+1)-3)$ MOVE LEFT 1 DOWN 3

DO THE ALGEBRA AND GET

$(x, y) \rightarrow (y+2, -x-4)$



$A(-2,1) \rightarrow A'(3,-2)$

$B(0,4) \rightarrow B'(6,-4)$

$C(5,3) \rightarrow C'(5,-9)$