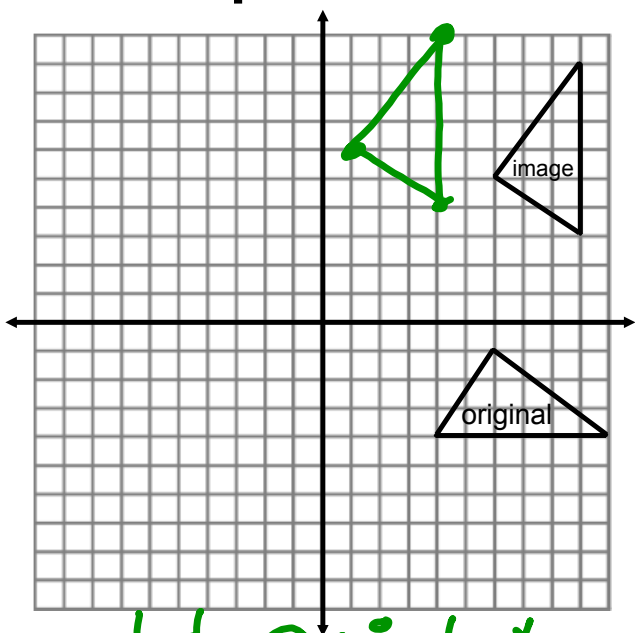
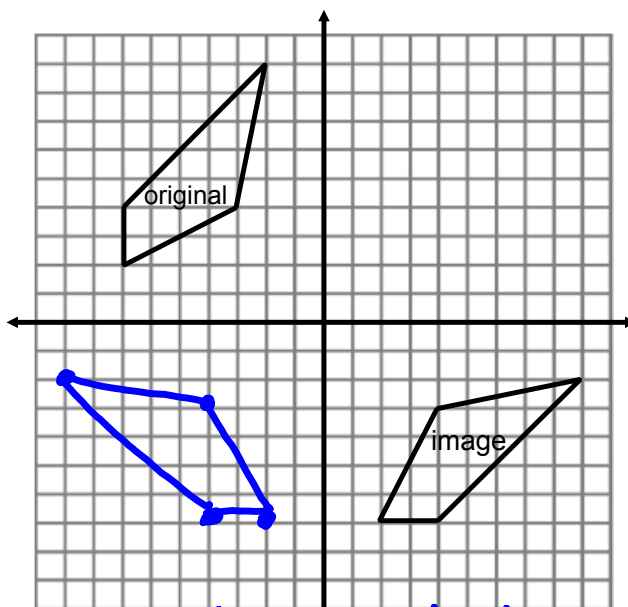


**Warm up:** List the transformations that took place.

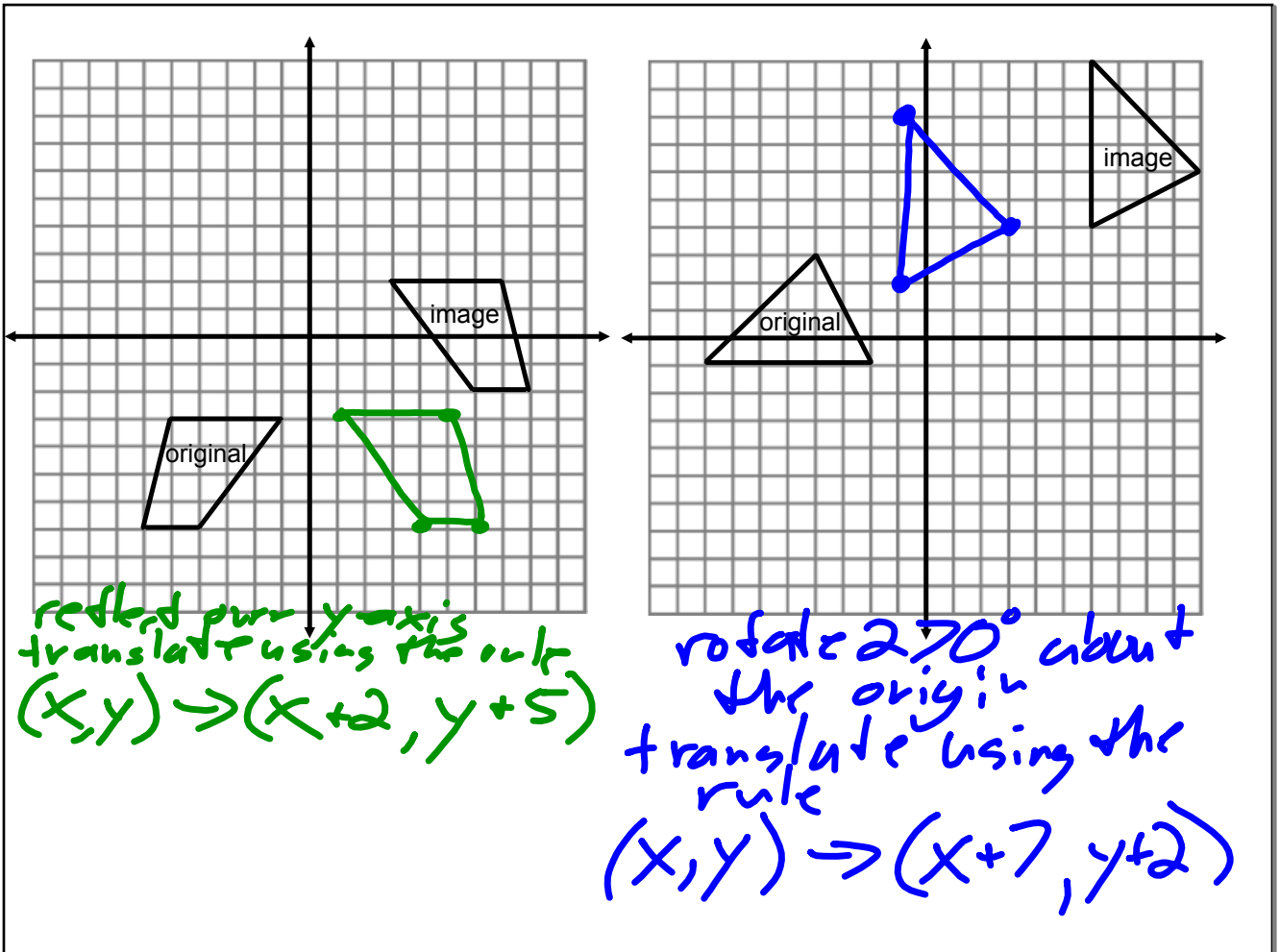


rotate  $90^\circ$  about  
the origin  
translate using the rule  
 $(x, y) \rightarrow (x+5, y-1)$



rotate  $90^\circ$  about the  
origin  
reflect over  
y-axis

# HW Solutions



# Showdown

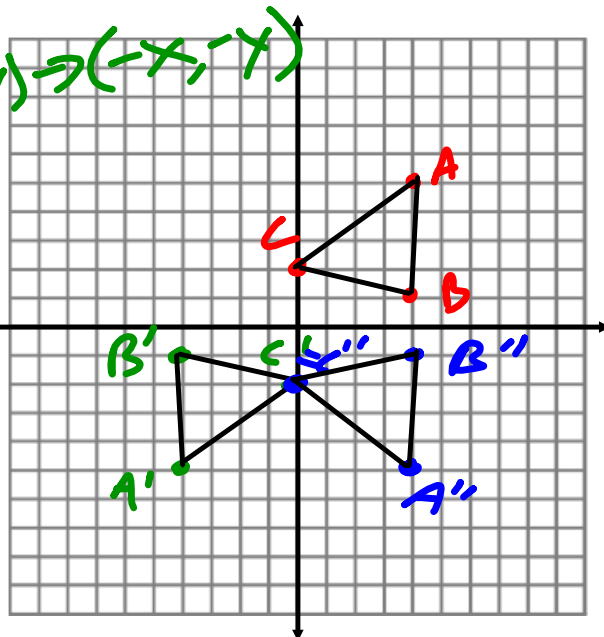
Graph the figure ABC with A(4,5), B(4,1) and C(0,2). Rotate the figure  $180^\circ$  about the origin, then reflect over the y-axis. List the coordinates of A', B', C', A'', B'', and C''.

$$(x, y) \rightarrow (-x, -y)$$

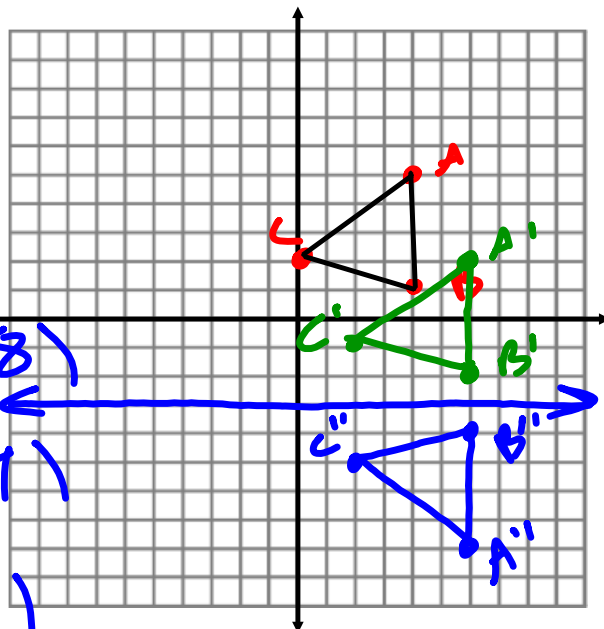
$$A'(-4, -5) \quad A''(4, 5)$$

$$B'(-4, -1) \quad B''(4, -1)$$

$$C'(0, -2) \quad C''(0, -2)$$

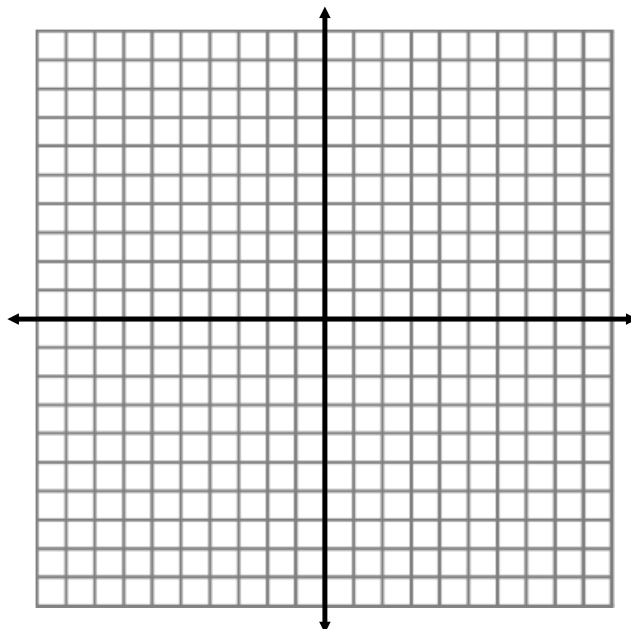


Graph the figure ABC with A(4,5), B(4,1) and C(0,2). Translate using the rule  $(x,y) \rightarrow (x+2,y-3)$ , then reflect over the line  $y = -3$ . List the coordinates of A', B', C', A'', B'', and C''.

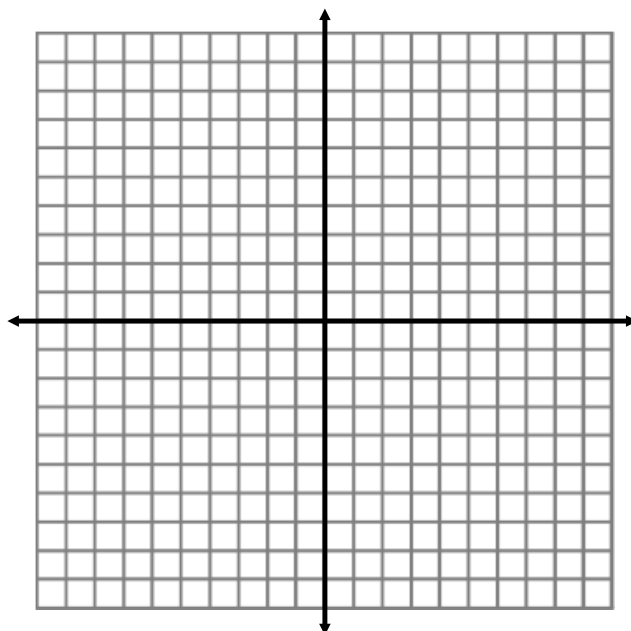


$A'(6,2)$   $A''(6,-8)$   
 $B'(6,-2)$   $B''(6,-4)$   
 $C'(2,-1)$   $C''(2,-5)$

Graph the figure ABC with A(4,5), B(4,1) and C(0,2). Rotate  $90^\circ$  about the origin, then dilate with scale factor 2. List the coordinates of A', B', C', A'', B'', and C''.

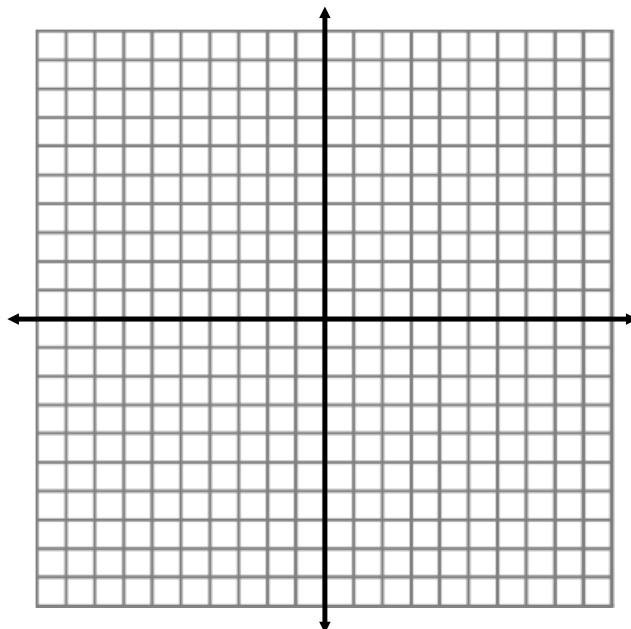


Graph the figure MATH with  $M(-8,-2)$ ,  $A(-6,2)$ ,  $T(-4,2)$  and  $H(-4,-6)$ . Dilate with scale factor  $1/2$ , then rotate  $270^\circ$  about the origin. List the coordinates of  $M'$ ,  $A'$ ,  $T'$ ,  $H'$ ,  $M''$ ,  $A''$ ,  $T''$ , and  $H''$ .

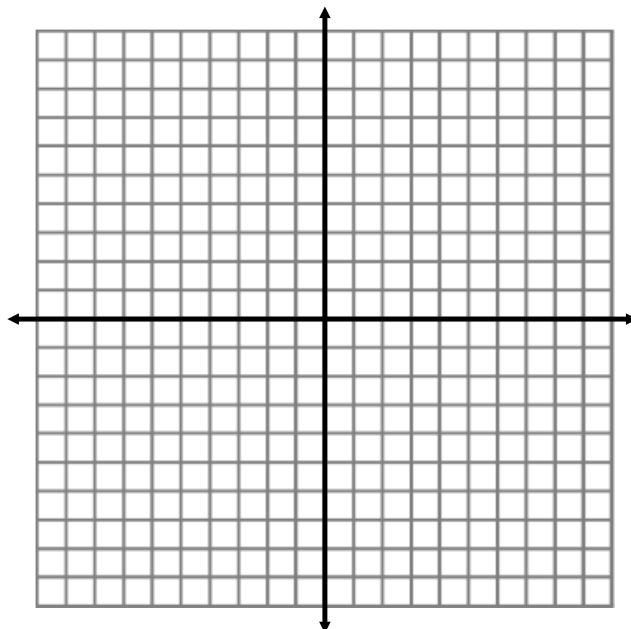


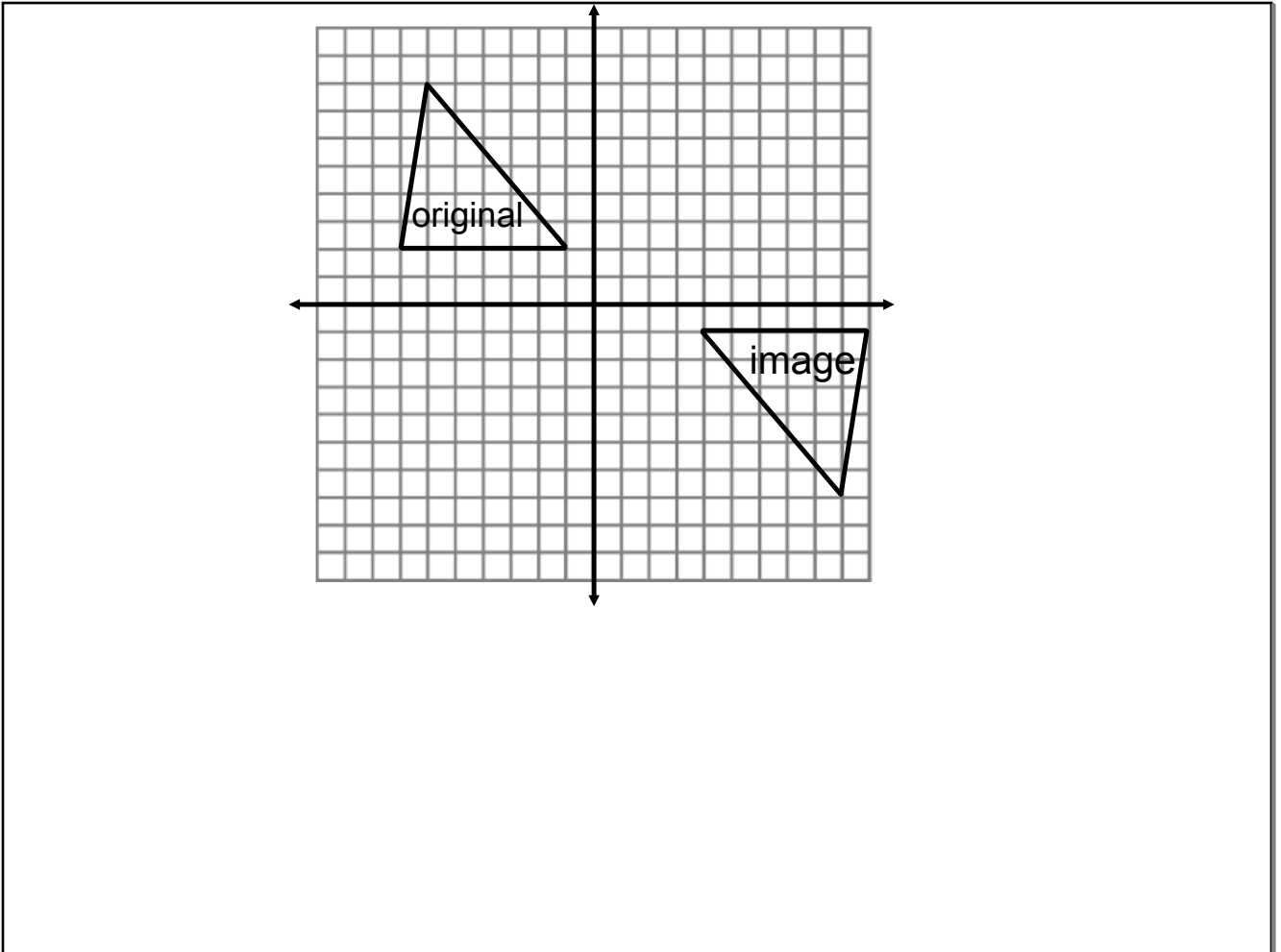


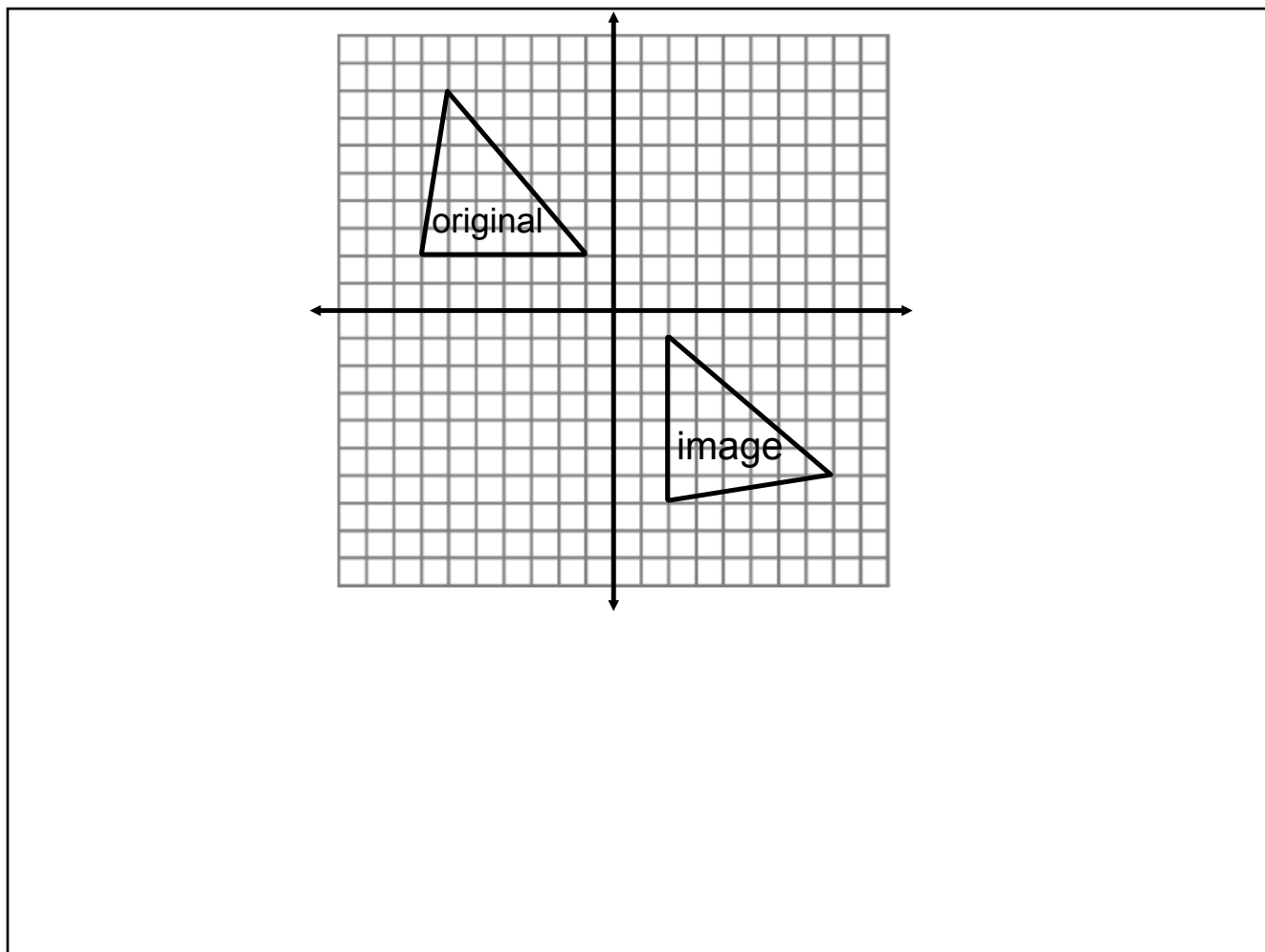
Graph the figure MATH with  $M(-8,-2)$ ,  $A(-6,2)$ ,  $T(-4,2)$  and  $H(-4,-6)$ . Reflect over the line  $x=1$ , then translate using the rule  $(x,y) \rightarrow (x-5, y+1)$ . List the coordinates of  $M'$ ,  $A'$ ,  $T'$ ,  $H'$ ,  $M''$ ,  $A''$ ,  $T''$ , and  $H''$ .



Graph the figure MATH with  $M(-8,-2)$ ,  $A(-6,2)$ ,  $T(-4,2)$  and  $H(-4,-6)$ . Reflect over the line  $y=2$ , then rotate  $180^\circ$  about the origin. List the coordinates of  $M'$ ,  $A'$ ,  $T'$ ,  $H'$ ,  $M''$ ,  $A''$ ,  $T''$ , and  $H''$ .







March 3, 2022

