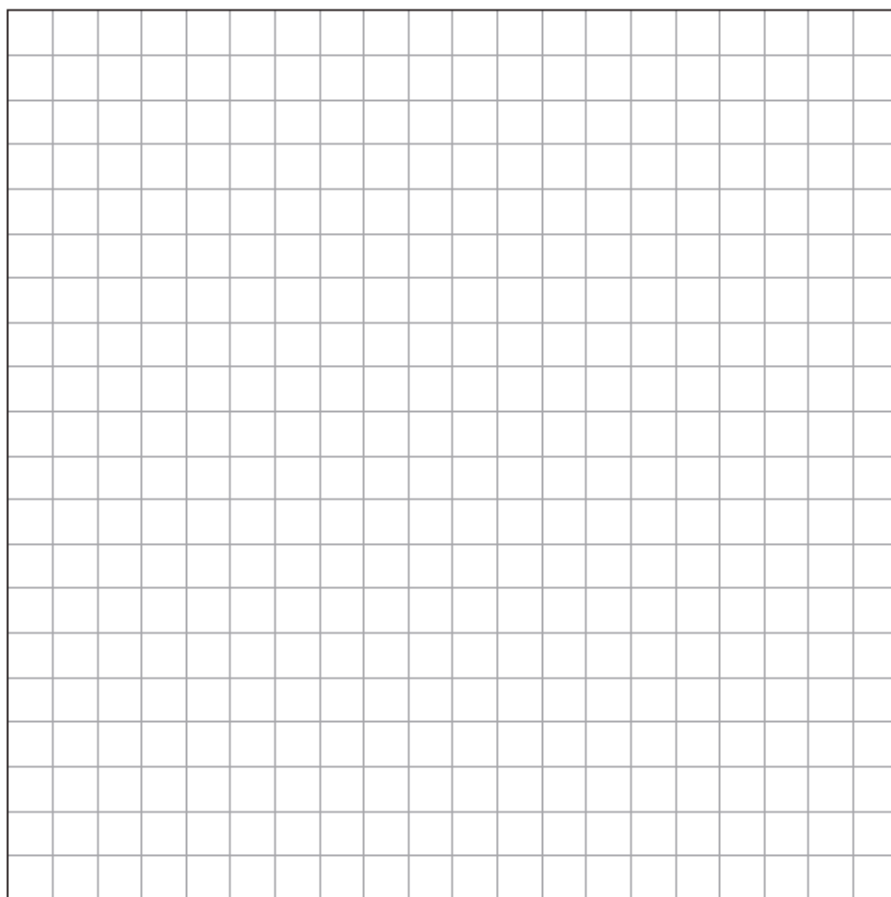


## Compositions with Line Reflections

*Do Now:*

27 On the accompanying grid, graph and label  $\overline{AB}$ , where  $A$  is  $(0,5)$  and  $B$  is  $(2,0)$ . Under the transformation  $r_{x\text{-axis}} \circ r_{y\text{-axis}}(\overline{AB})$ ,  $A$  maps to  $A''$ , and  $B$  maps to  $B''$ . Graph and label  $\overline{A''B''}$ . What single transformation would map  $\overline{AB}$  to  $\overline{A''B''}$ ?

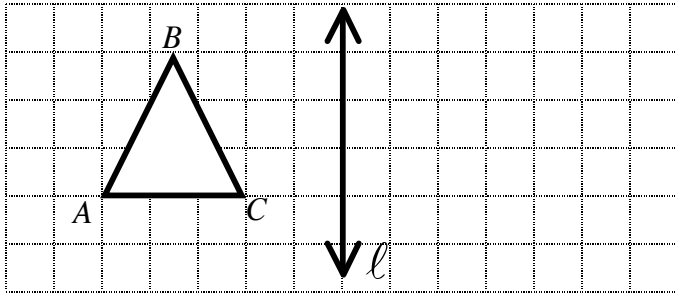


(Math B Regents, August 2003, #27)

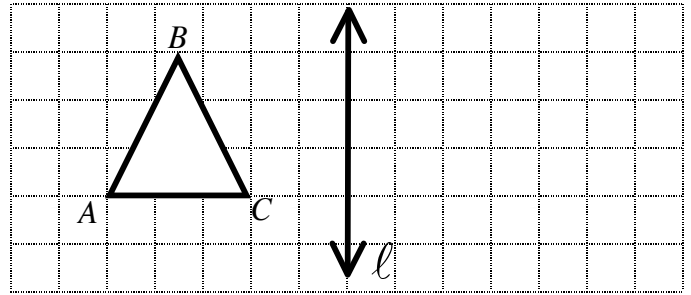
# Compositions with Line Reflections

1.

a. On the grid below, graph the image of  $\triangle ABC$  under  $T_{7,0}$



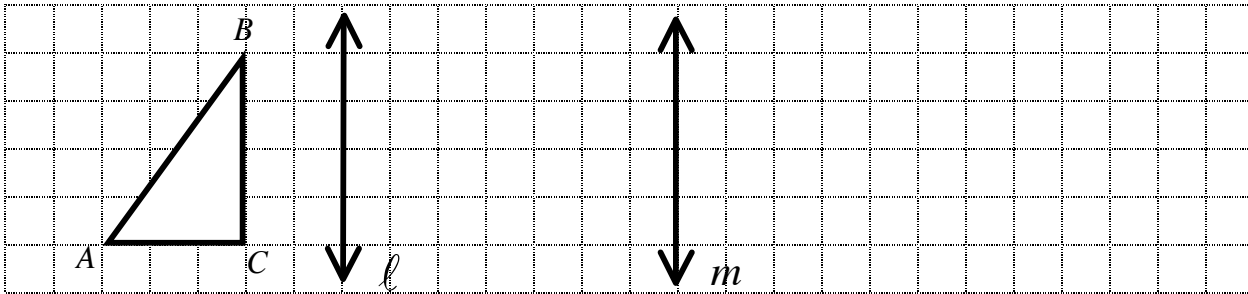
b. On the grid below, graph the image of  $\triangle ABC$  under  $r_l$ .



c. Are these two transformations equivalent?

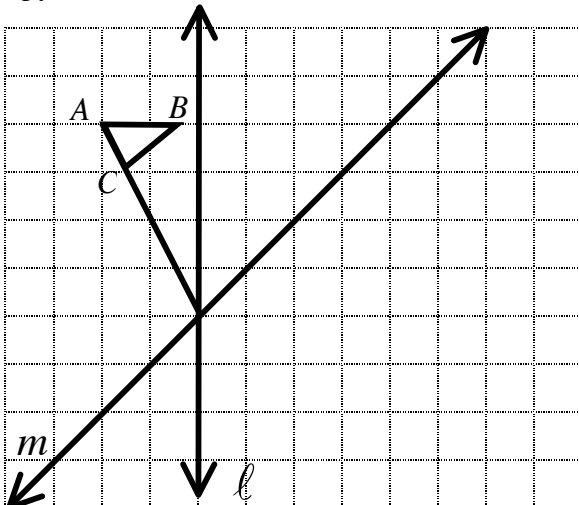
2.

a. Graph  $\triangle A''B''C''$ , the image of  $\triangle ABC$  under  $r_m \circ r_l$ .



b. What single transformation is  $r_m \circ r_l$  equivalent to?

3.



a. Graph the image of the “flag” under  $r_m \circ r_l$ .

b. What single transformation is  $r_m \circ r_l$  equivalent to?