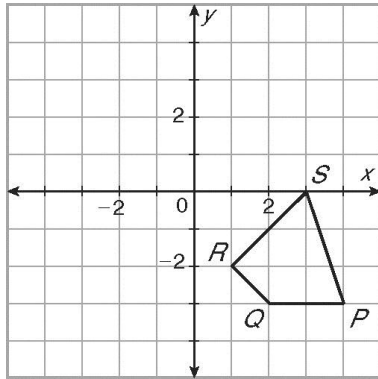
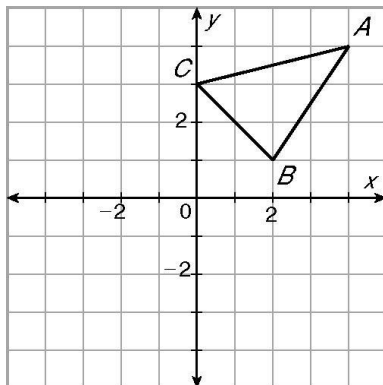


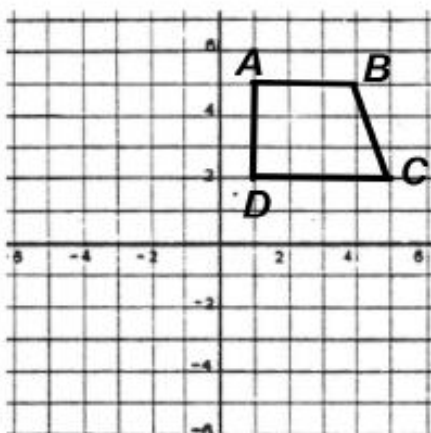
1. Quad.  $PQRS$  is translated along the vector  $\langle -4, -2 \rangle$  and reflected in the  $x$ -axis. List the coordinates of the image points.



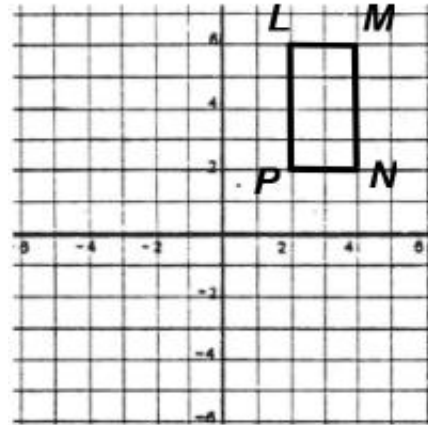
2.  $\triangle ABC$  is rotated  $180^\circ$  about the origin. List the coordinates of the image points.



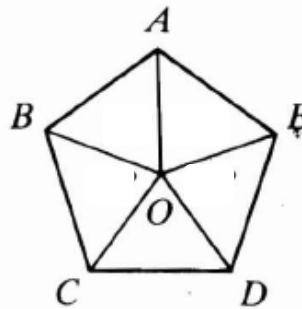
3. Apply a dilation centered at the origin with scale factor  $\frac{-1}{2}$  to trapezoid  $ABCD$ . List the coordinates of the image points.



4. Rectangle  $LMNP$  is rotated  $90^\circ$  with center at the origin. List the coordinates of the image points.



- 5.

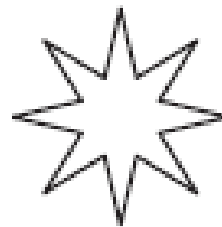


$O$  is the center of regular pentagon  $ABCDE$ .

A rotation of  $216^\circ$  about point  $O$  maps  $E \rightarrow$ .

What angle of rotation maps  $B \rightarrow D$ ?

6. How many lines of symmetry?



7. Give the angle of rotational symmetry.

