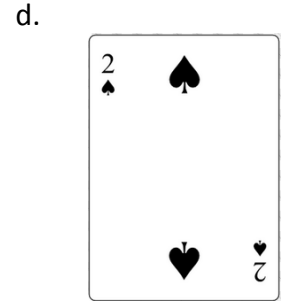
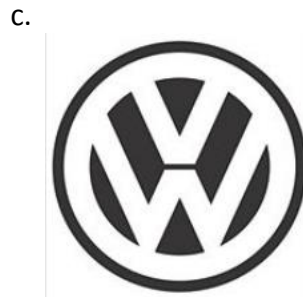
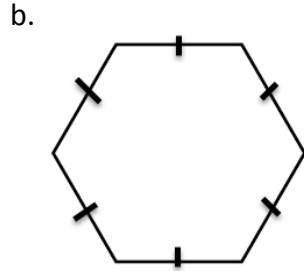
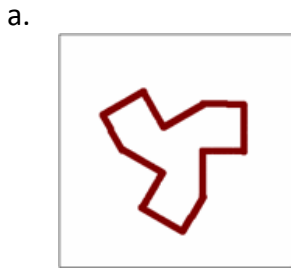
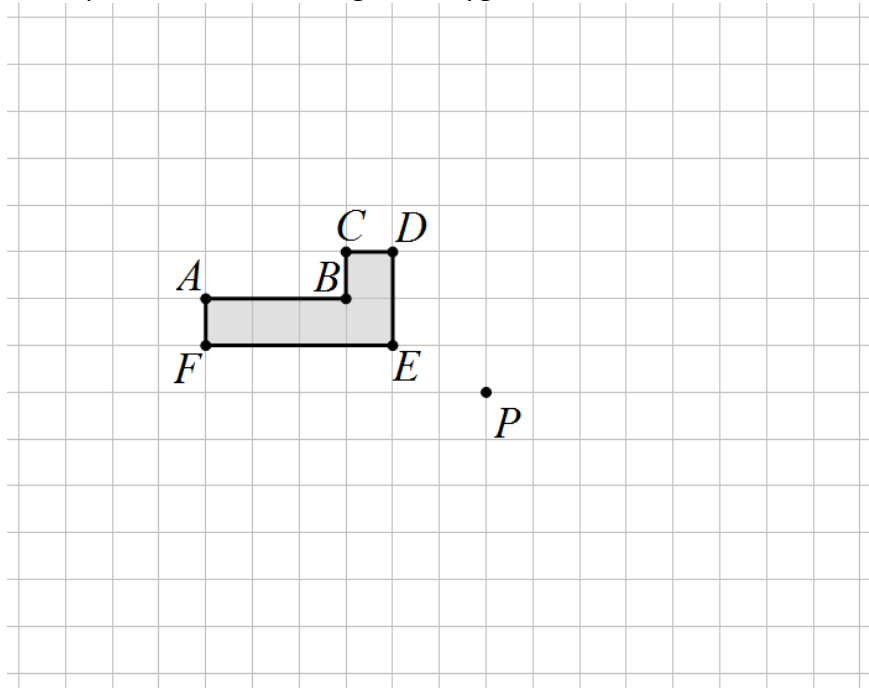


1. Determine which of these shapes has rotational symmetry. For those that do, determine the angle of rotation.



2. Graph and label the image of Polygon ABCDE under each of the following transformations:



a.  $R_{P, 90^\circ}$

b.  $R_{P, -90^\circ}$

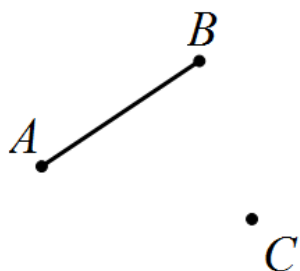
c.  $T_{\langle 9, -4 \rangle}$

d.  $r_{\overrightarrow{CD}}$

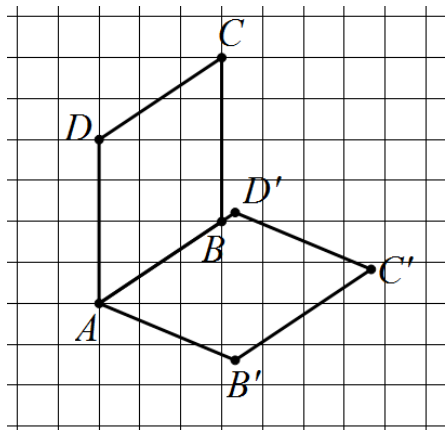
3. Which of the transformations in #2 does not preserve orientation? Explain your reasoning.

4. Which of the transformations in #2 preserves parallelism? Explain your reasoning.

5. Use a compass and/or protractor to rotate  $\overline{AB}$  150 degrees around C.



6.



a. Prove quadrilateral  $ABCD$  is a parallelogram. (*mixed review*)

b. Describe precisely a single rigid motion that maps parallelogram  $ABCD$  onto quadrilateral  $AB'C'D'$ .

c. Is quadrilateral  $AB'C'D'$  a parallelogram? Justify your response.

d. Explain how parallelogram  $ABCD$  can be used to find the area of quadrilateral  $AB'C'D'$ . Find the area of  $AB'C'D'$ . (*mixed review*)