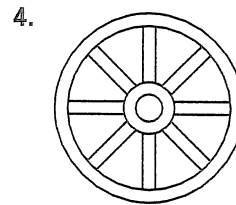
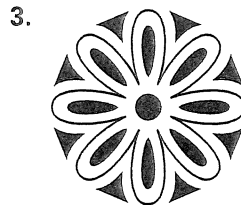
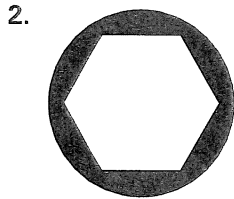
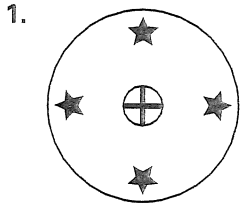


**Practice B**

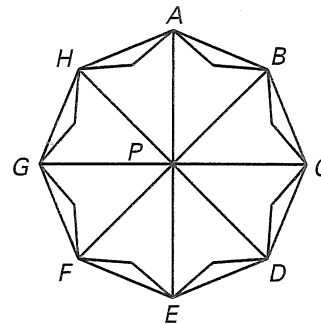
For use with pages 412–420

Determine whether the figure has rotational symmetry. If so, describe the rotations that map the figure onto itself.



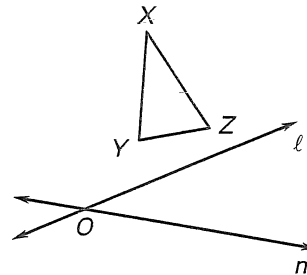
State the segment or triangle that represents the image.

5.  $90^\circ$  clockwise rotation of  $\overline{AB}$  about  $P$
6.  $90^\circ$  clockwise rotation of  $\overline{DE}$  about  $P$
7.  $90^\circ$  counterclockwise rotation of  $\overline{GH}$  about  $P$
8.  $180^\circ$  counterclockwise rotation of  $\overline{EF}$  about  $P$
9.  $180^\circ$  clockwise rotation of  $\triangle DPE$  about  $P$
10.  $45^\circ$  counterclockwise rotation of  $\triangle HPA$  about  $P$



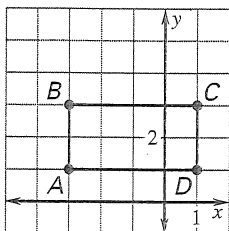
In Exercises 11 and 12, lines  $\ell$  and  $m$  intersect at point  $O$ . Consider a reflection of  $\triangle XYZ$  in  $\ell$ , followed by a reflection in line  $m$ .

11. If the angle between  $\ell$  and  $m$  is  $32^\circ$ , what is the angle of rotation about  $O$ ?
12. If the angle of rotation about  $O$  is  $128^\circ$ , what is the acute angle between  $\ell$  and  $m$ ?
13. Consider two perpendicular lines,  $\ell$  and  $m$ . Describe the rotation that is equivalent to reflecting a preimage in  $\ell$  followed by a reflection in  $m$ .

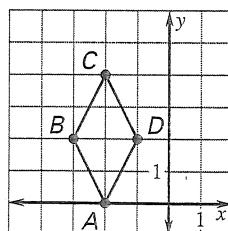


Name the coordinates of the vertices of the image after a clockwise rotation of the given number of degrees about the origin.

14.  $90^\circ$



15.  $180^\circ$



16.  $270^\circ$

