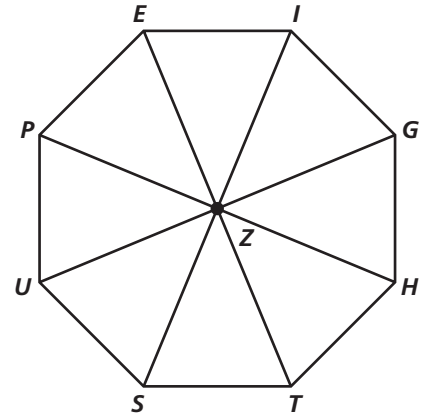


# Practice 9-3

## Rotations

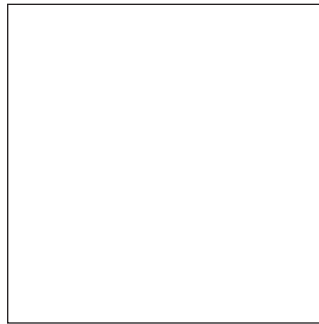
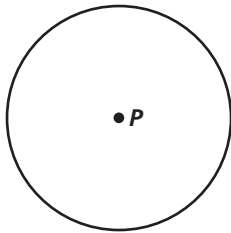
Regular octagon *EIGHTSUP* is divided into eight congruent triangles. Find the image of each point or segment for the given rotation.



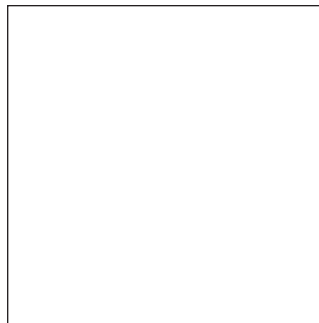
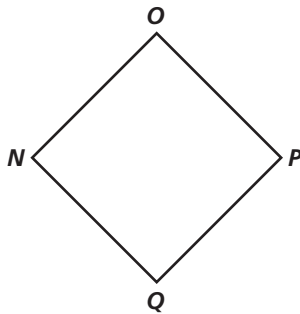
1.  $45^\circ$  rotation of  $G$  about  $Z$  \_\_\_\_\_
2.  $225^\circ$  rotation of  $U$  about  $Z$  \_\_\_\_\_
3.  $315^\circ$  rotation of  $E$  about  $Z$  \_\_\_\_\_
4.  $270^\circ$  rotation of  $\overline{EI}$  about  $Z$  \_\_\_\_\_
5.  $135^\circ$  rotation of  $S$  about  $Z$  \_\_\_\_\_
6.  $360^\circ$  rotation of  $\overline{ST}$  about  $Z$  \_\_\_\_\_

Copy each figure and point  $P$ . Draw the image of each figure for the given rotation about  $P$ . Label the vertices of each image.

7.  $50^\circ$

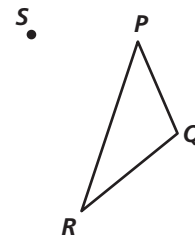


8.  $90^\circ$



Copy  $\triangle PQR$  and point  $S$ . Then draw the image for the given composition of rotations about point  $S$ .

9.  $20^\circ$  and then  $70^\circ$



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