

LESSON 9.4

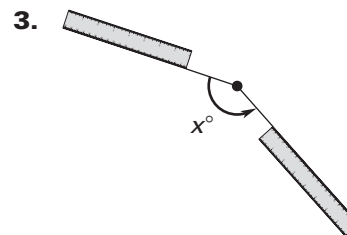
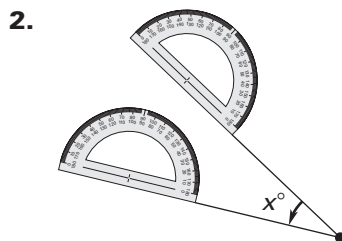
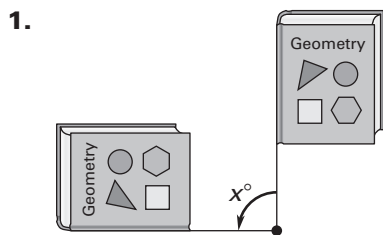
Practice A

For use with pages 598–605

If you turn this in on time: do the odds.
 If you turn this in late or you are doing it over: do the evens.

LESSON 9.4

Match the diagram with the angle of rotation.



A. 30°

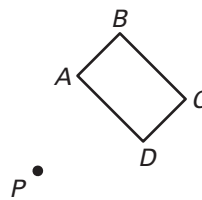
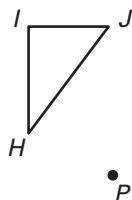
B. 90°

C. 150°

Trace the polygon and point P on paper. Then draw a rotation of the polygon the given number of degrees about P .

4. 45°

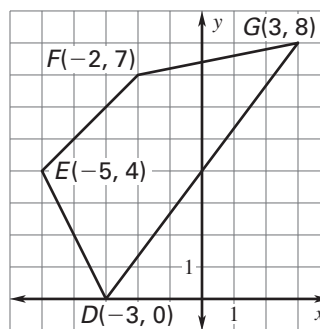
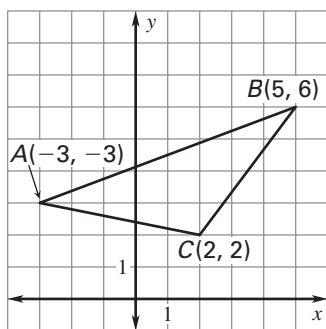
5. 90°



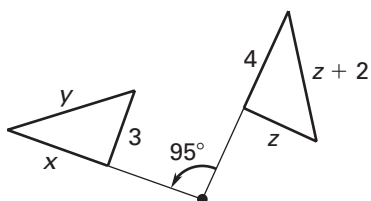
Rotate the figure the given number of degrees about the origin. List the coordinates of the vertices of the image.

6. 90°

7. 270°



8. Find the value of y in the rotation of the triangle about P .



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Student score:
 How well do you feel you understand this learning target:

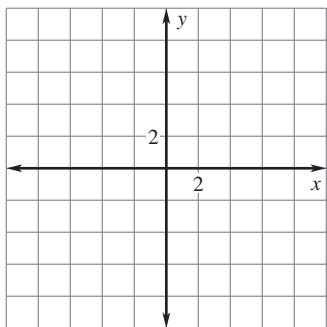
A
 B
 C
 D
 F

Teacher Score:

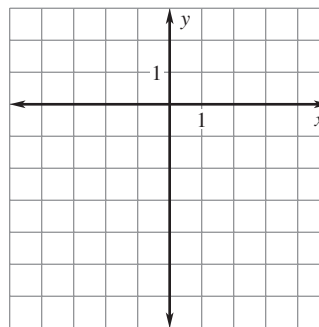
LESSON
9.4**Practice A** *continued*
For use with pages 598–605

Find the image matrix that represents the rotation of the polygon about the origin. Then graph the polygon and its image.

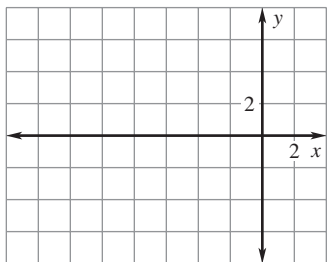
9.
$$\begin{matrix} & A & B & C \\ \begin{bmatrix} -2 & -1 & 1 \\ -5 & 1 & -2 \end{bmatrix}; & 180^\circ \end{matrix}$$



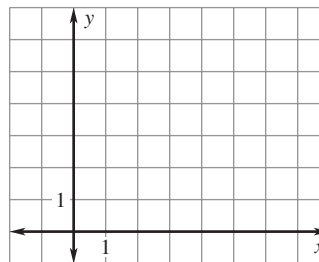
10.
$$\begin{matrix} & W & X & Y & Z \\ \begin{bmatrix} -2 & 1 & 5 & 2 \\ -3 & -4 & -2 & -1 \end{bmatrix}; & 270^\circ \end{matrix}$$



11.
$$\begin{matrix} & H & I & J & K \\ \begin{bmatrix} -6 & -4 & -1 & -2 \\ 1 & 4 & 5 & 2 \end{bmatrix}; & 90^\circ \end{matrix}$$



12.
$$\begin{matrix} & L & M & N \\ \begin{bmatrix} 2 & 4 & 1 \\ 3 & 1 & 6 \end{bmatrix}; & 360^\circ \end{matrix}$$



13. **Error Analysis** The vertices of $\triangle ABC$ are $A(0, 2)$, $B(4, 3)$, and $C(2, 5)$. Describe and correct the error in setting up the matrix multiplication for a 180° rotation about the origin.

$$\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} \begin{bmatrix} 0 & 4 & 2 \\ 2 & 3 & 5 \end{bmatrix}$$

14. **Daylight Saving Time** You are setting your clocks back an hour because Daylight Saving Time has ended. You move the hands counterclockwise to change the time from 11:00 P.M. to 10:00 P.M. Find the angle of rotation of the hour hand about the center of the clock.

