

Name \_\_\_\_\_

# 4-4B Lesson Master

## Questions on SPUR Objectives

See Student Edition pages 293–297 for objectives.

### PROPERTIES Objective F

1. Suppose  $C'D'E'F'$  is the image of quadrilateral  $CDEF$  under a size change of magnitude  $k$ .
  - a. How do the measures of  $\angle D$  and  $\angle D'$  compare? \_\_\_\_\_
  - b. How do  $EF$  and  $E'F'$  compare? \_\_\_\_\_
2. Under  $S_{\frac{1}{4}}$ , what is the image of each point?
  - a.  $(8, -4)$  \_\_\_\_\_
  - b.  $(3, 12)$  \_\_\_\_\_
  - c.  $(0, -8)$  \_\_\_\_\_
  - d.  $(5, \frac{1}{2})$  \_\_\_\_\_

### PROPERTIES Objective G

3. Give the matrix for each size transformation.
 

a. $S_8$ _____	b. $S_{\frac{4}{5}}$ _____
c. $S_{0.75}$ _____	d. $S_k$ _____
4. What matrix is associated with the size transformation that maps  $(-12, 8)$  onto  $(-3, 2)$ ? \_\_\_\_\_
5. What is the magnitude of the size transformation associated with  $\begin{bmatrix} 6 & 0 \\ 0 & 6 \end{bmatrix}$ ? \_\_\_\_\_

**Fill in the Blanks** In 6 and 7, fill in the blanks to complete each statement.

6. The matrix  $\begin{bmatrix} 7 & 0 \\ 0 & 7 \end{bmatrix}$  is associated with a \_\_\_\_\_ with center \_\_\_\_\_ and magnitude \_\_\_\_\_.
7. The matrix associated with a size change of magnitude 8 is \_\_\_\_\_.

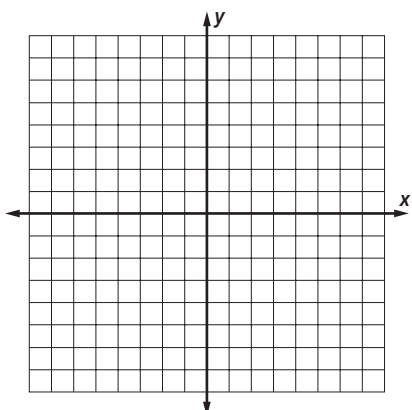
Name \_\_\_\_\_

**4-4B**

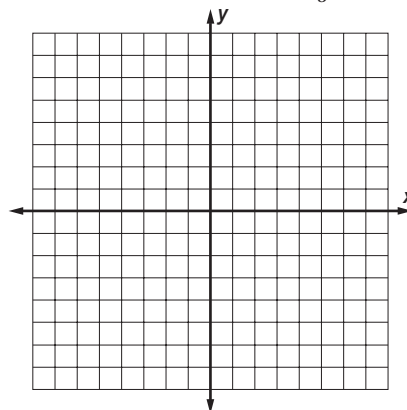
page 2

**REPRESENTATIONS** Objective K

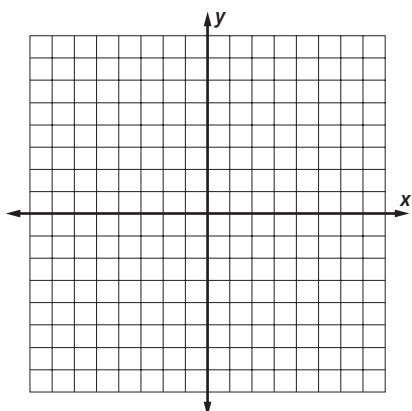
8. Graph the polygon  $\begin{bmatrix} -1 & 0 & 3 & 0 \\ 0 & -4 & 0 & 5 \end{bmatrix}$  and its image under  $S_2$ .



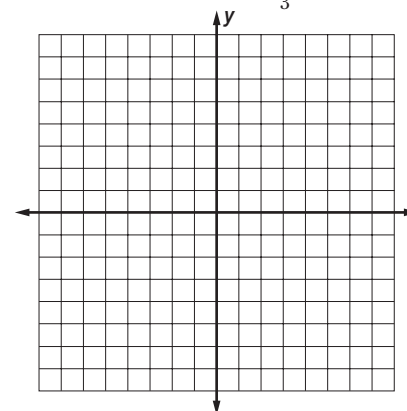
9. Graph the polygon  $\begin{bmatrix} 0 & 3 & -3 \\ 3 & 6 & -6 \end{bmatrix}$  and its image under  $S_{\frac{1}{3}}$ .



10. Graph the polygon  $\begin{bmatrix} -1 & 3 & 4 & 1 \\ 2 & 0 & 2 & 4 \end{bmatrix}$  and its image under  $S_2$ .



11. Graph the polygon  $\begin{bmatrix} 6 & 3 & 3 \\ 0 & -3 & 6 \end{bmatrix}$  and its image under  $S_{\frac{2}{3}}$ .



**REVIEW** Lesson 4-3, Objective C

In 12 and 13, perform the indicated operation.

12.  $\begin{bmatrix} -8 & -6 \\ 0 & 3 \end{bmatrix} \cdot \begin{bmatrix} 5 & 2 & 5 & 0 \\ 1 & 0 & -4 & 8 \end{bmatrix}$

13.  $\begin{bmatrix} -3 & 4 & 3 \\ 8 & -2 & 4 \\ 0 & -7 & 2 \\ -1 & -6 & 1 \end{bmatrix} \cdot \begin{bmatrix} 2 & 1 & -9 & 2 \\ 4 & 7 & -1 & -1 \\ 0 & 0 & 2 & 3 \end{bmatrix}$