

# Additional Practice

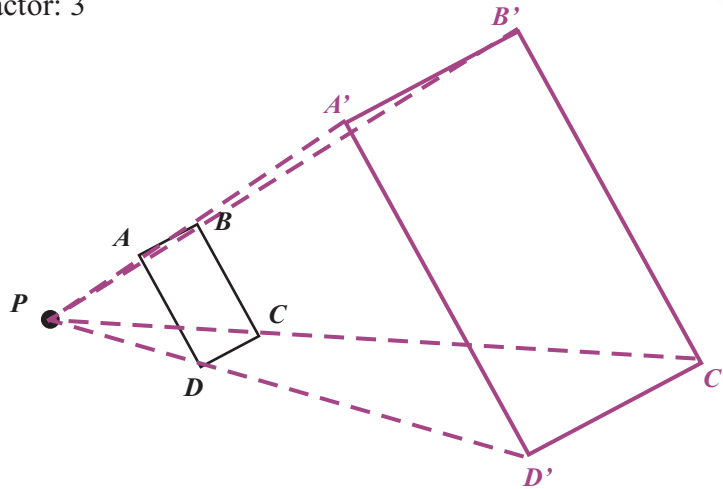
## 11.3

NAME \_\_\_\_\_

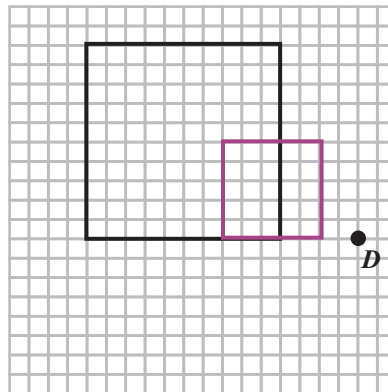
Module 11 Transformations of Shapes  
Lesson 3 Dilations

Construct a dilation with the given center and scale factor.

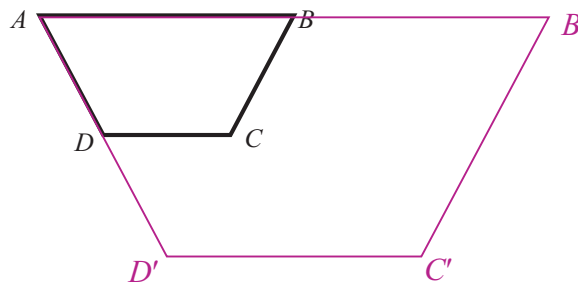
1. Center:  $P$ ; scale factor: 3



2. Center:  $D$ ; scale factor:  $\frac{1}{2}$



3. Center:  $A$ ; scale factor: 2



4. A triangle with vertices  $A(-2, 3)$ ,  $B(0, -4)$ , and  $C(6, -4)$  is dilated, and its image points are  $A'\left(-\frac{1}{2}, \frac{3}{4}\right)$ ,  $B'(0, -1)$ , and  $C'\left(1\frac{1}{2}, -1\right)$ . What was the scale factor? Was the dilation an enlargement or a reduction?

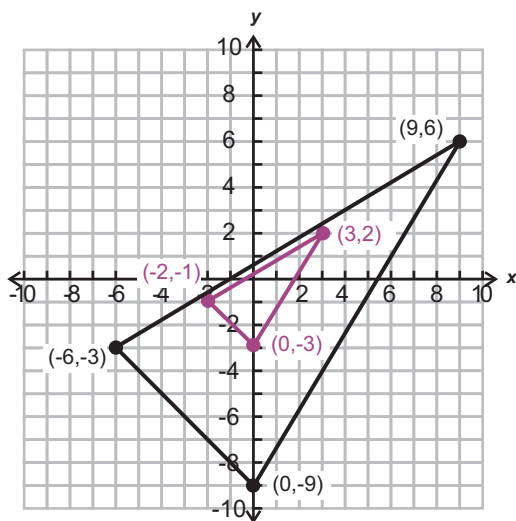
$\frac{1}{4}$ : reduction

5. A triangle with vertices  $A(0, 1)$ ,  $B(-2, -6)$ , and  $C(1, -4)$  is dilated under a scale factor of  $2\frac{1}{2}$ . What are the coordinates of the vertices of the image? Was the dilation an enlargement or a reduction?

$A'\left(0, 2\frac{1}{2}\right)$ ,  $B'(-5, -15)$ ,  $C'\left(2\frac{1}{2}, -10\right)$ : enlargement

Draw the dilation with the given scale factor. The center of dilation is  $(0, 0)$ .

6. Scale factor:  $\frac{1}{3}$



7. Scale factor: 4

