8.4 Rotations Day 3

TSW understand concept of dilation
*drawing images after dilation
*find coordinates of points after dilation
***find the center of dilation**

Vocabulary

Scale Factor Magnitude=

OR

Scale Factor Magnitude=

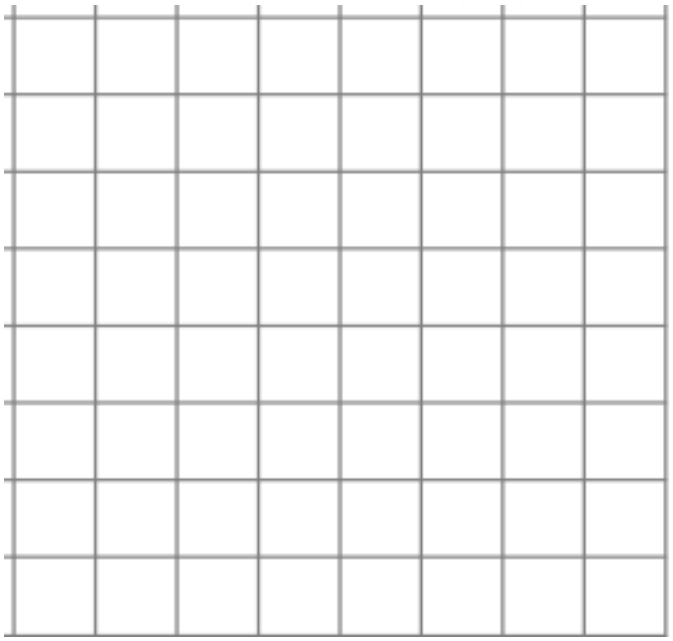
Example 17 **Find the center of a dilation.**

Describe the transformation.

The tables show the coordinates for each triangle and their corresponding images. The triangles are each mapped onto their images by a dilation. Draw each triangle and its image on a coordinate plane. Then mark and label *P* as the center of dilation. Find the scale factor for each triangle. Then describe the transformation.

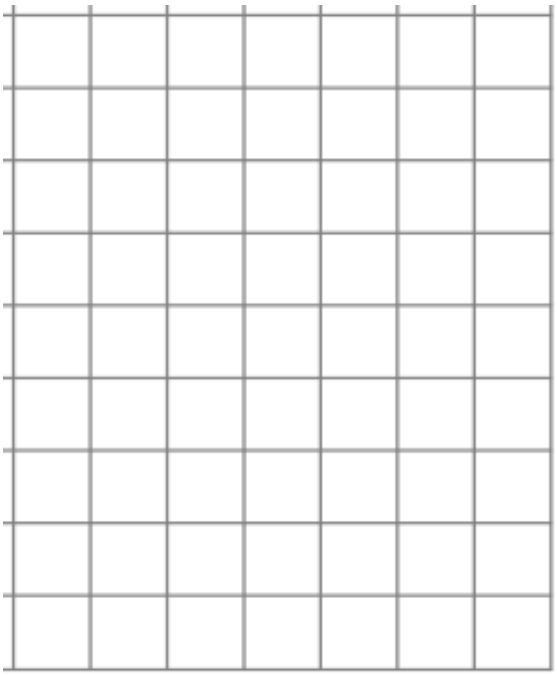
a)

Original Point	*A* (0, 1)	*B* (4, 1)	*C* (4, 3)
Is Mapped Onto	*A′* (−1, −1)	*B′* (1, −1)	*C′* (1, 0)



b)

Original Point	$D(-1, 7)$	$E(-1, 3)$	$F(-3, 5)$
Is Mapped Onto	$D'(2, 1)$	$E'(2, 3)$	$F'(3, 2)$



Guided Practice

Use graph paper. Use 1 grid square on both axes to represent 1 unit for the interval from −7 to 4.

4 The triangles are each mapped onto their images by a dilation. Draw each triangle and its image on a coordinate plane. Then mark and label C as the center of dilation. Find the scale factor for each triangle.

a)

Original Point	$S(1, 3)$	$T(0, 1)$	$U(2, 0)$
Is Mapped Onto	$S'(-5, -3)$	$T'(-3, 1)$	$U'(-7, 3)$

b)

Original Point	$P(1, 3)$	$Q(1, 2)$	$R(2, 1)$
Is Mapped Onto	$P'(-3, 1)$	$Q'(-3, -2)$	$R'(0, -5)$