Worksheet: Rotation and Dilation

1-4 Find the coordinates of the image of each point under the given rotation about the origin.

1) (-5, -2) 90° clockwise
   2) (5, -1) 180°

3) (-4, 6) 270° clockwise
   4) (-7, 9) 180°

5-6 Draw a dilation of each figure with the given scale factor. The center of dilation is the origin.

5) Scale factor = 2
6) Scale factor = \( \frac{1}{2} \)

7-8 Given \( \triangle A'B'C' \) is the image of \( \triangle ABC \) under a dilation about the origin.

7) What's the scale factor?

8) How many times greater is the area of \( \triangle A'B'C' \) than the area of \( \triangle ABC \)?

9-11 What type of transformation is being performed below? (rotation, dilation, reflection, or translation)

9)
10)
11)
12) Translate QRST 6 units to the right and 3 units up. Write new ordered pairs.

\[ L'(\quad ,\quad) \]

\[ M'(\quad ,\quad) \]

\[ K'(\quad ,\quad) \]

\[ N'(\quad ,\quad) \]

13) If rectangle KLMN shown below is reflected across the y-axis what are the coordinates of N’?

A. (5, 2)
B. (-5, 2)
C. (5, -2)
D. (-5, -5)

14) What is the coordinate of Y after a rotation of 90° counterclockwise about the origin.

A. (4, 2)
B. (2, 4)
C. (2, -4)
D. (-2, 4)

15) Which graph shows a reflection of the following figure about the y-axis?

A.  

B.  

C.  

D.  