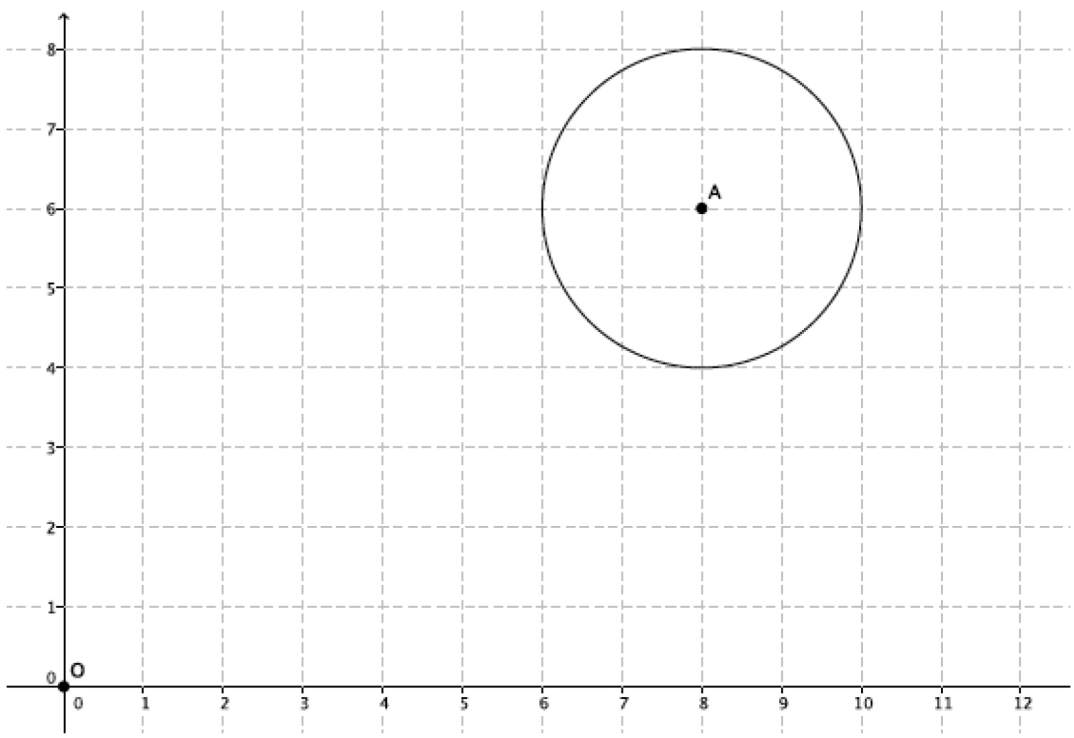
Name _____ Date_____

Examples of Dilations

1. Dilate circle A from center O by a scale factor $= \frac{1}{2}$. Make sure to use enough points to make a good image of the original figure.



2. What scale factor would magnify the dilated circle back to the original size of circle A? How do you know?

1. Dilate the figure from center O by a scale factor $r = 2$. Make sure to use enough points to make a good image of the original figure.

2. Describe the process for selecting points when dilating a curved figure.

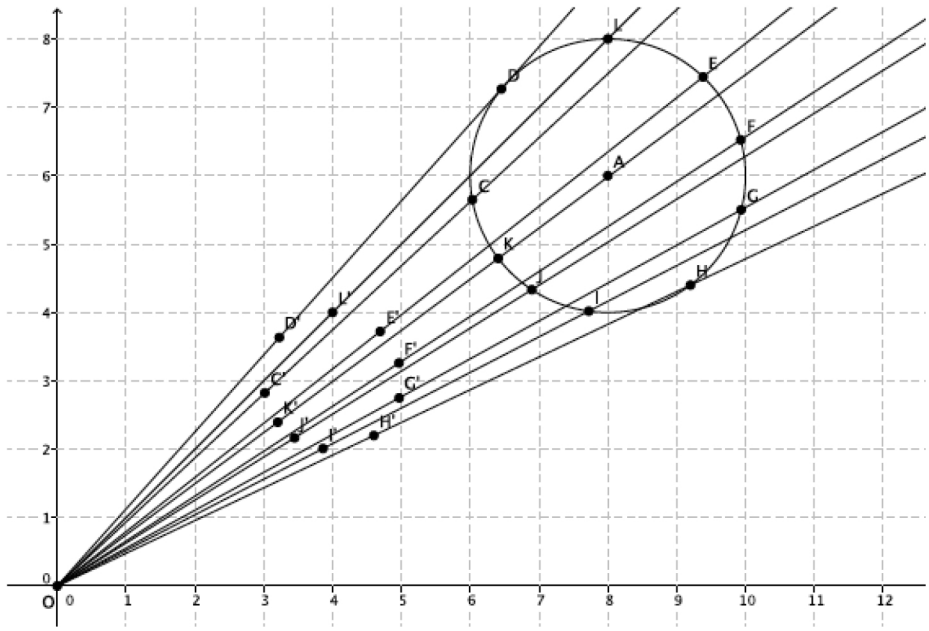
3. A triangle ABC was dilated from center O by a scale factor of $r = 5$. What scale factor would shrink the dilated figure back to the original size?

4. A figure has been dilated from center O by a scale factor of $r = \frac{7}{6}$. What scale factor would shrink the dilated figure back to the original size?

5. A figure has been dilated from center O by a scale factor of $r = \frac{3}{10}$. What scale factor would magnify the dilated figure back to the original size?

1. **Dilate circle A from center O by a scale factor $= \frac{1}{2}$. Make sure to use enough points to make a good image of the original figure.**

   Student work shown below. Verify that students used enough points to produce an image similar to the original.



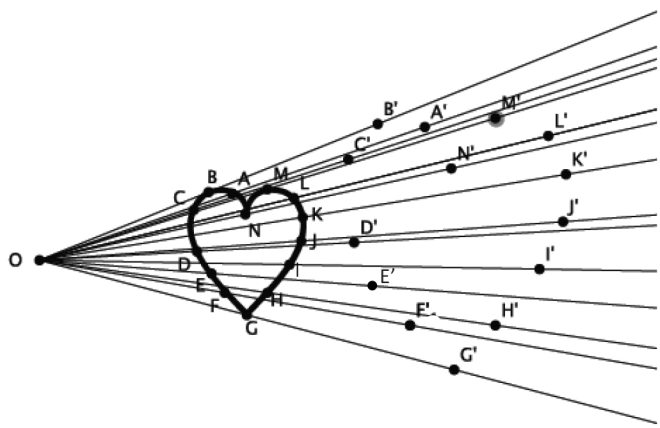
2. **What scale factor would magnify the dilated circle back to the original size of circle A?**

   A scale factor of $r = 2$ would bring the dilated circle back to the size of circle A. Since the circle was dilated by a scale factor of $r = \frac{1}{2}$, then to bring it back to its original size, you must dilate by a scale factor that is the reciprocal of $\frac{1}{2}$, which is 2.

Students practice dilating a curved figure and stating the scale factor that would bring a dilated figure back to its original size.

1. **Dilate the figure from center O by a scale factor $r = 2$. Make sure to use enough points to make a good image of the original figure.**

   Sample student work shown below. Verify that students used enough points to produce an image similar to the original.



2. **Describe the process for selecting points when dilating a curved figure.**

   When dilating a curved figure, you have to make sure to use a lot of points to produce a decent image of the original figure. You also have to make sure that the points you choose are not all concentrated in just one part of the figure.

3. **A triangle ABC was dilated from center O by a scale factor of $r = 5$. What scale factor would shrink the dilated figure back to the original size?**

   A scale factor of $r = \frac{1}{5}$ would bring the dilated figure back to its original size.

4. **A figure has been dilated from center O by a scale factor of $r = \frac{7}{6}$. What scale factor would shrink the dilated figure back to the original size?**

   A scale factor of $r = \frac{6}{7}$ would bring the dilated figure back to its original size.

5. **A figure has been dilated from center O by a scale factor of $r = \frac{3}{10}$. What scale factor would magnify the dilated figure back to the original size?**

   A scale factor of $r = \frac{10}{3}$ would bring the dilated figure back to its original size.