

Lesson Summary

Dilations map circles to circles and ellipses to ellipses.

If a figure is dilated by scale factor r , we must dilate it by a scale factor of $\frac{1}{r}$ to bring the dilated figure back to the original size. For example, if a scale factor is $r = 4$, then to bring a dilated figure back to the original size, we must dilate it by a scale factor $r = \frac{1}{4}$.

Problem Set

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 figure 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?