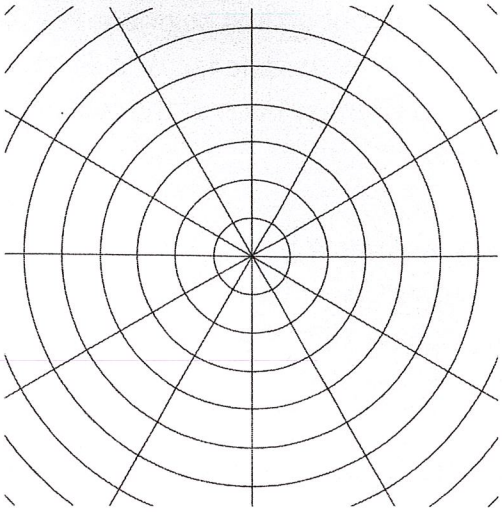
Lesson 2 Summary

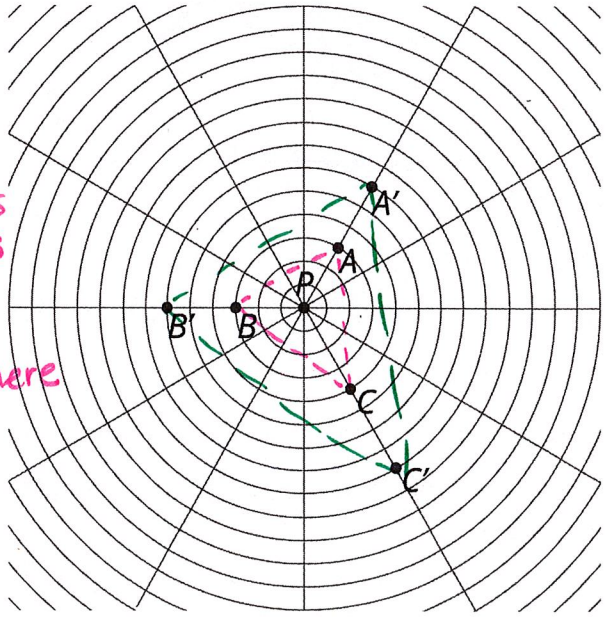
A circular grid like this one can be helpful for performing **dilations**. (with center of dilation being the center of the grid)

The radius of the smallest circle is one unit, and the radius of each successive circle is one unit more than the previous one.



* circles have same center
* center is the point where the lines meet

To perform a dilation, we need a **center of dilation**, a scale factor, and a point to dilate. In the picture, P is the center of dilation. With a scale factor of 2, each point stays on the same ray from P, but its distance from P doubles:



* it is easier to dilate if points are on the circles & rays & not in between, but any point anywhere on the grid can be dilated.

* To Dilate a polygon, dialate each vertice, then connect them. (see picture- dilate point A, B, then C, then connect them)

Since the circles on the grid are the same distance apart, segment PA' has twice the length of segment PA, and the same holds for the other points.

↳ because the scale factor is 2

Lesson 2 Glossary Terms

- center (of a dilation)
- dilation

* Each angle in the original figure is congruent to the corresponding angle in the dilated figure.

* Dilations of polygons are the same polygons but just a scale copy of the original
* Each side of the new polygon is parallel to the corresponding side on the original polygon.