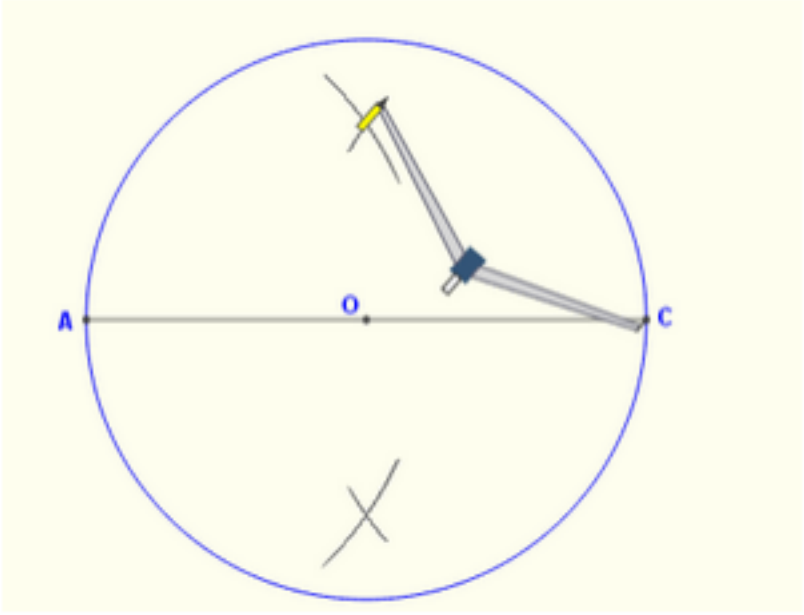
Name _____ Date _____ Period _____

17.5 Constructions – Inscribed square, triangle and hexagon (G.CO.13)

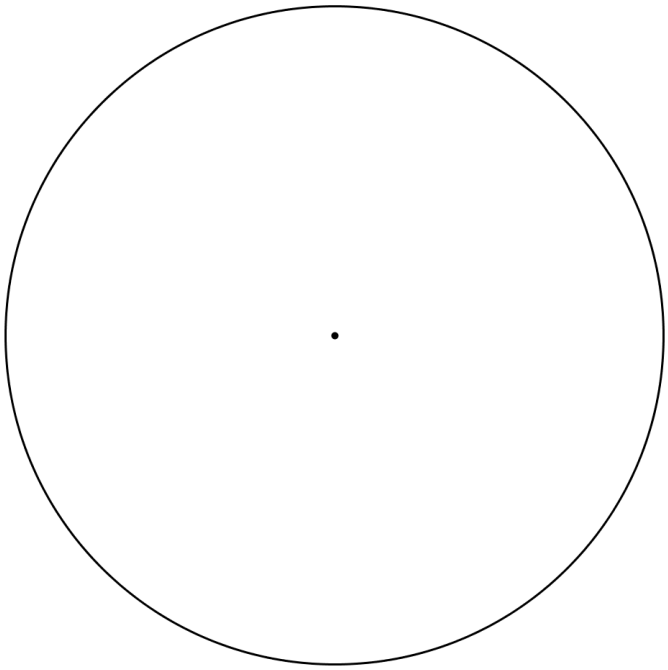
1. Bryan has started a construction of an inscribed square, but he couldn't remember what came next. Please finish the construction and tell Bryan the steps for completing this construction.



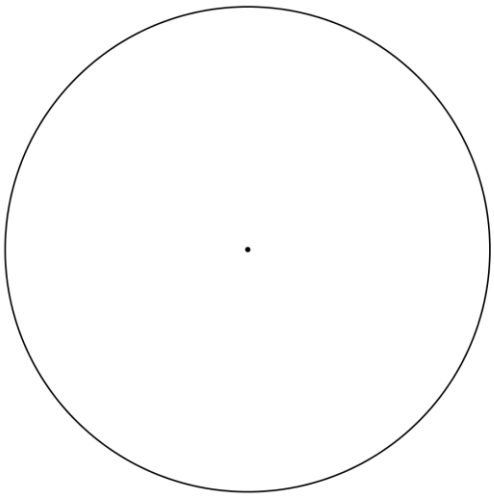
Steps for finishing the construction:

Construct a square inscribed in the following circles.

2.

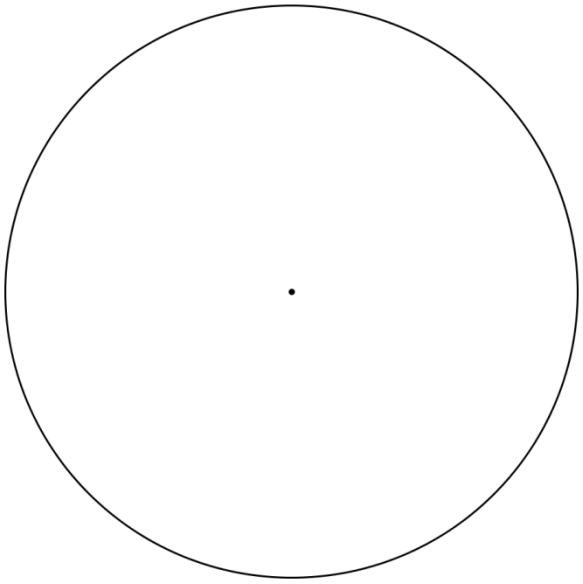


3.

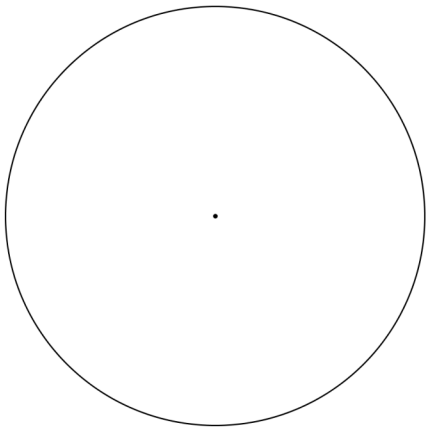


Construct a hexagon inscribed in the following circles.

4.

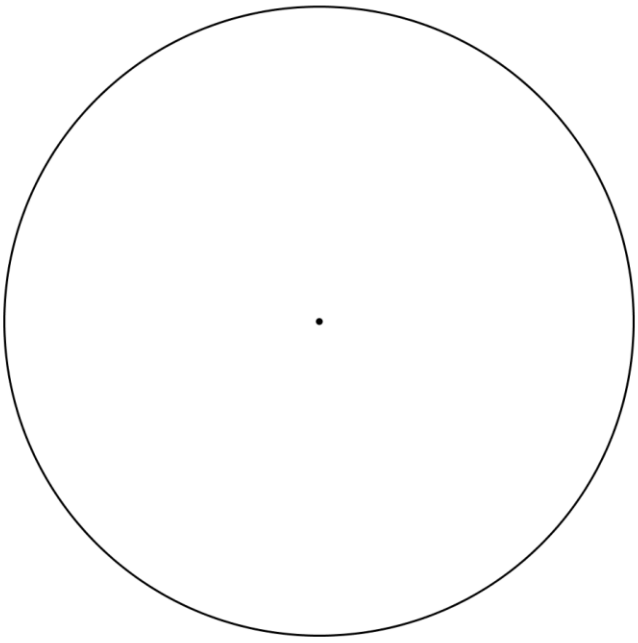


5.

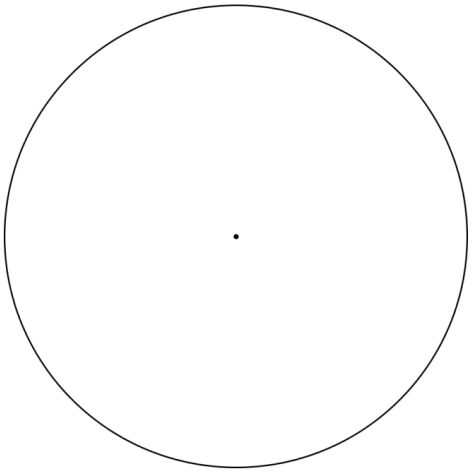


Construct an equilateral triangle inscribed in the following circles.

6.

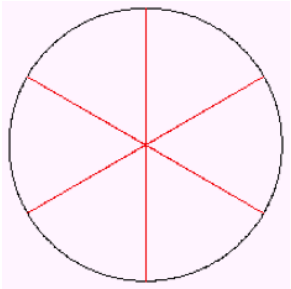


7.



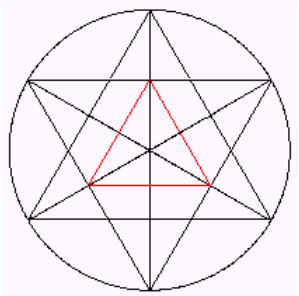
CHALLENGE:

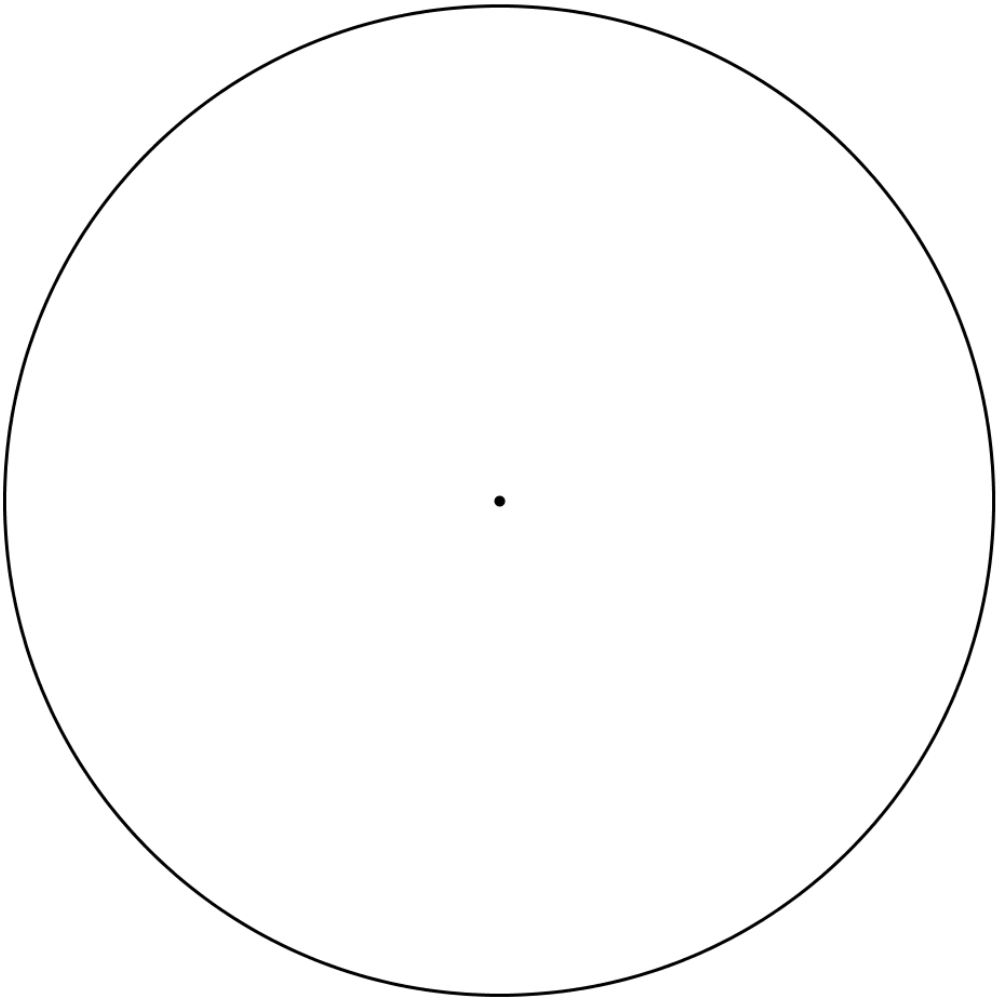
1) Begin the construction of a hexagon in the circle below. Instead of connecting each consecutive point (e.g. creating a hexagon), connect each point to the opposite point. We will call these diameter lines. Your construction should appear like this:



2) Using the same marks from your hexagon, create **TWO** equilateral triangles.

3) Mark the six points where the large triangles intersect (cross) the three diameter lines. Then connect every other mark to form a small triangle. See the image to the right as an example:



4) Connect the other three marks to form a small upside-down triangle.

5) Now you have drawn all the lines you need. Now darken the lines you would like and erase the other lines.