

MGE.ALT 5: I am able to use a variety of tools and methods to construct basic geometric figures.

MGE.AST 5.3: I can construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

1. Constructing an equilateral triangle inscribed in a circle.
a. Step 1: Describe how you would construct an equilateral triangle. Indicate which constructions we have already done is part of the process.

b. Step 2: Describe how you would inscribe an equilateral triangle constructed in Step 1 into a circle. This is a construction you have already done.

2. Constructing a square inscribed in a circle.
a. Step 1: Describe how you would construct a square. Indicate which constructions we have already done is part of the process.

b. Step 2: Describe how you would inscribe the square constructed in Step 1 into a circle. (Hint: How can you find the center of a square?)

3. Constructing a regular hexagon inscribed in a circle.

a. How does the side length of a regular hexagon compare to the length of the radius of the circle in which it is inscribed?

(Hint: Draw the segments from each vertex to the center of the regular hexagon. What kind of triangle is formed?)

b. Describe how a regular hexagon can be created using any circle. This will describe how to construct a regular hexagon inscribed in a circle.