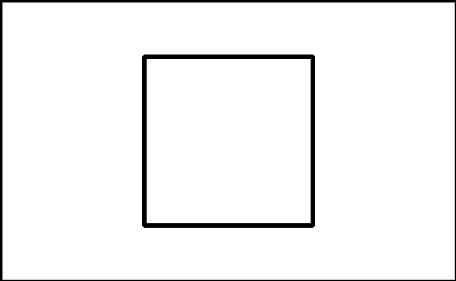
## Lesson 7: Construction Techniques 5: Squares

* Let’s use straightedge and compass moves to construct squares.

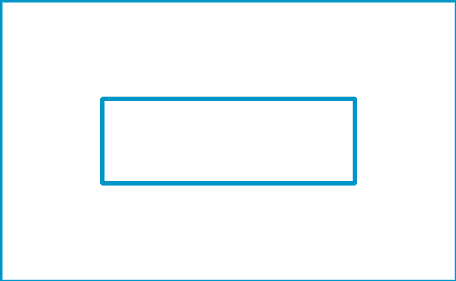
### 7.1: Which One Doesn’t Belong: Polygons

Which one doesn’t belong?

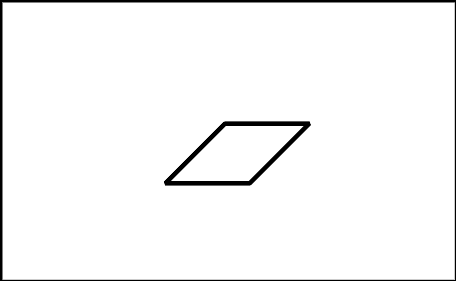
A



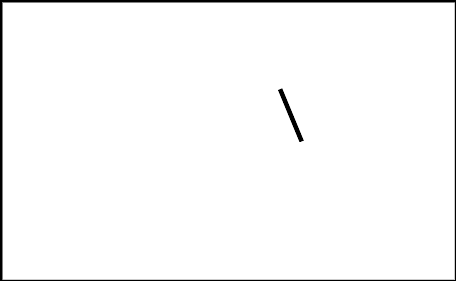
B



C

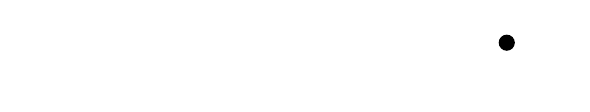


D

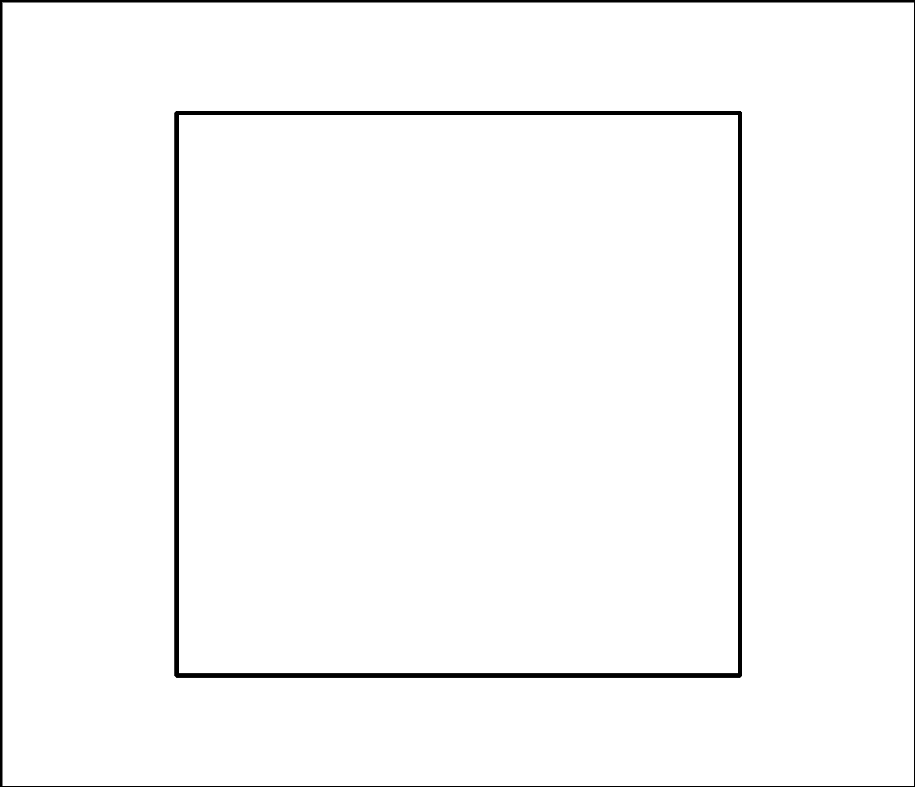


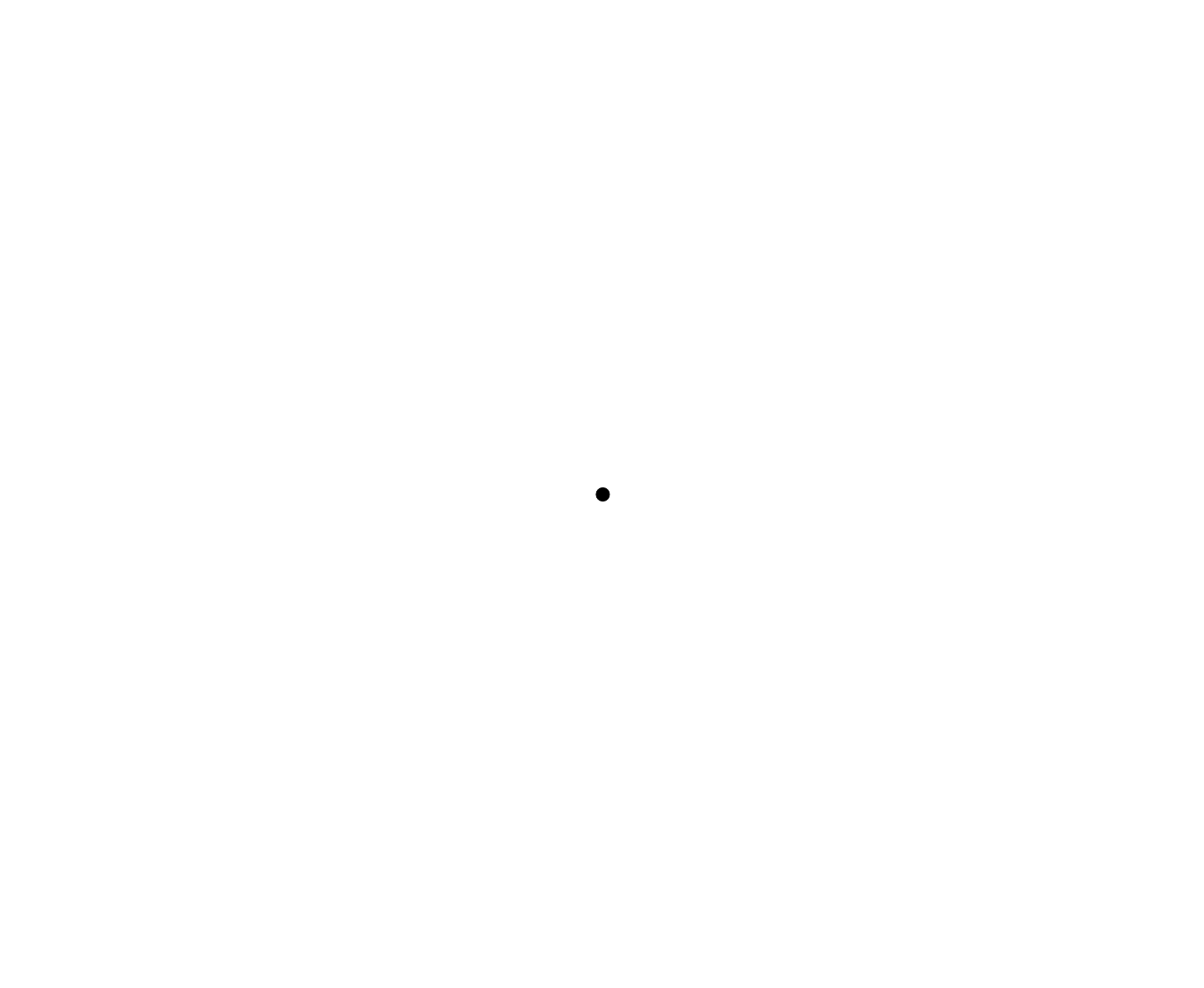
### 7.2: It’s Cool to Be Square

Use straightedge and compass moves to construct a square with segment as one of the sides.



### 7.3: Trying to Circle a Square

1. Here is square with diagonal drawn:
   1. Construct a circle centered at with radius .
   2. Construct a circle centered at with radius .
   3. Draw the diagonal and write a conjecture about the relationship between the diagonals and .
   4. Label the intersection of the diagonals as point and construct a circle centered at with radius . How are the diagonals related to this circle?
   * 
2. Use your conjecture and straightedge and compass moves to construct a square inscribed in a circle.

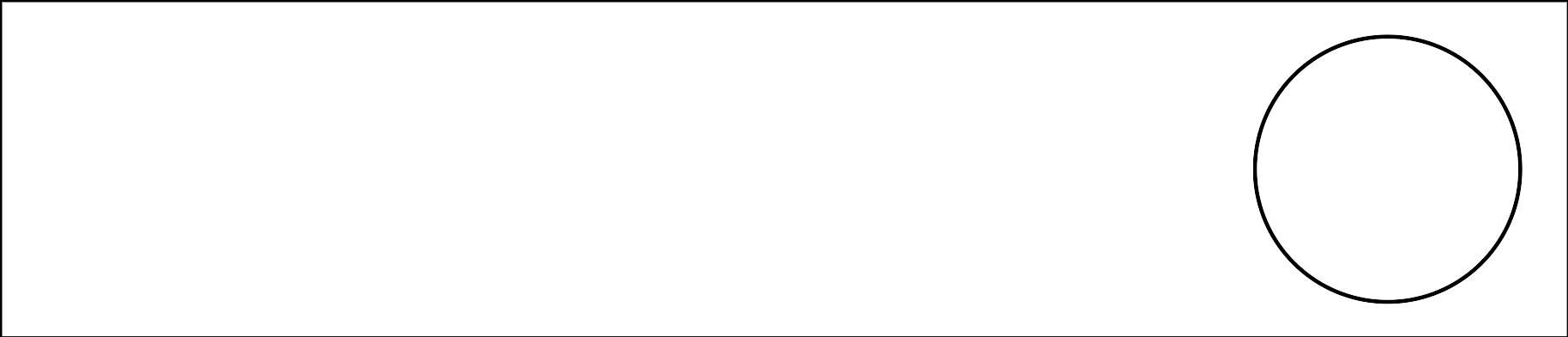
* 

#### Are you ready for more?

Use straightedge and compass moves to construct a square that fits perfectly outside the circle, so that the circle is inscribed in the square. How do the areas of these 2 squares compare?

### Lesson 7 Summary

We can use what we know about perpendicular lines and congruent segments to construct many different objects. A square is made up of 4 congruent segments that create 4 right angles. A square is an example of a **regular polygon** since it is equilateral (all the sides are congruent) and equiangular (all the angles are congruent). Here are some regular polygons inscribed inside of circles:





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