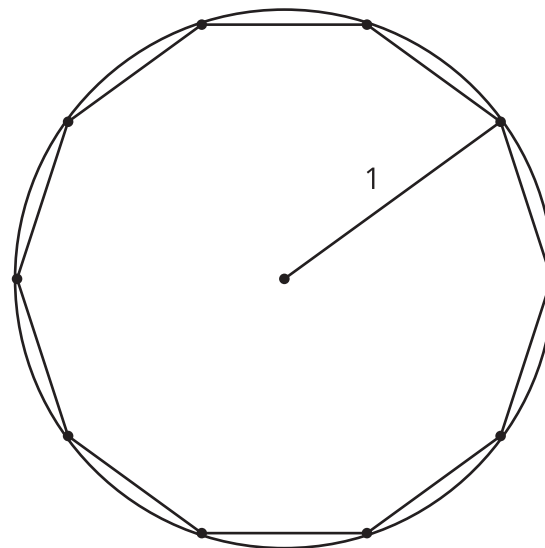
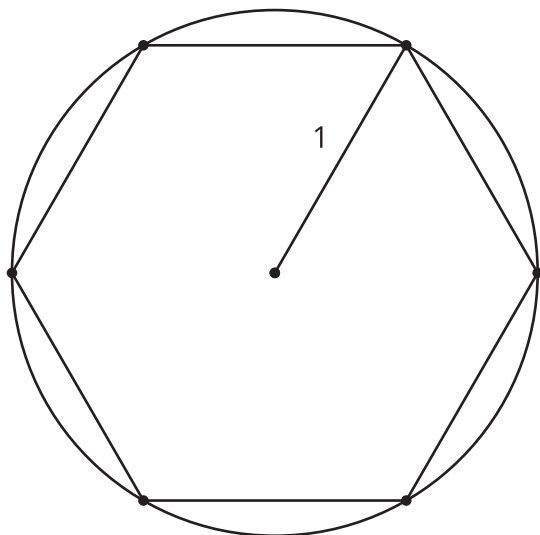
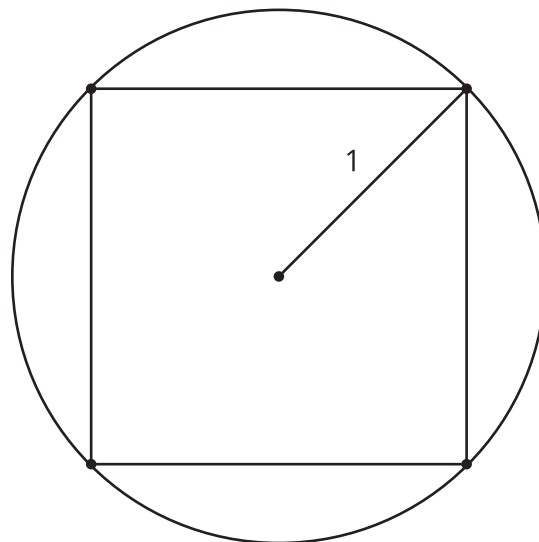


# Unit 4 Lesson 10: Solving Problems with Trigonometry

## 1 Notice and Wonder: Practicing Perimeter (Warm up)

### Student Task Statement

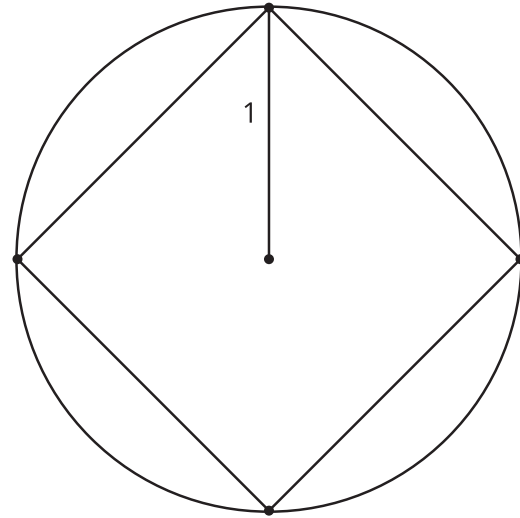
What do you notice? What do you wonder?



## 2 Growing Regular Polygons

### Student Task Statement

1. Here is a square inscribed in a circle with radius 1 meter. What is the perimeter of the square? Explain or show your reasoning.



2. What is the perimeter of a regular pentagon inscribed in a circle with radius 1 meter? Explain or show your reasoning.
3. What is the perimeter of a regular decagon inscribed in a circle with radius 1 meter? Explain or show your reasoning.
4. What is happening to the perimeter as the number of sides increases?

### 3 Gentle Descent

#### Student Task Statement

An airplane travels 150 miles horizontally during a decrease of 35,000 feet vertically.

1. What is the angle of descent?
2. How long is the plane's path?



# Images for Activity Synthesis

