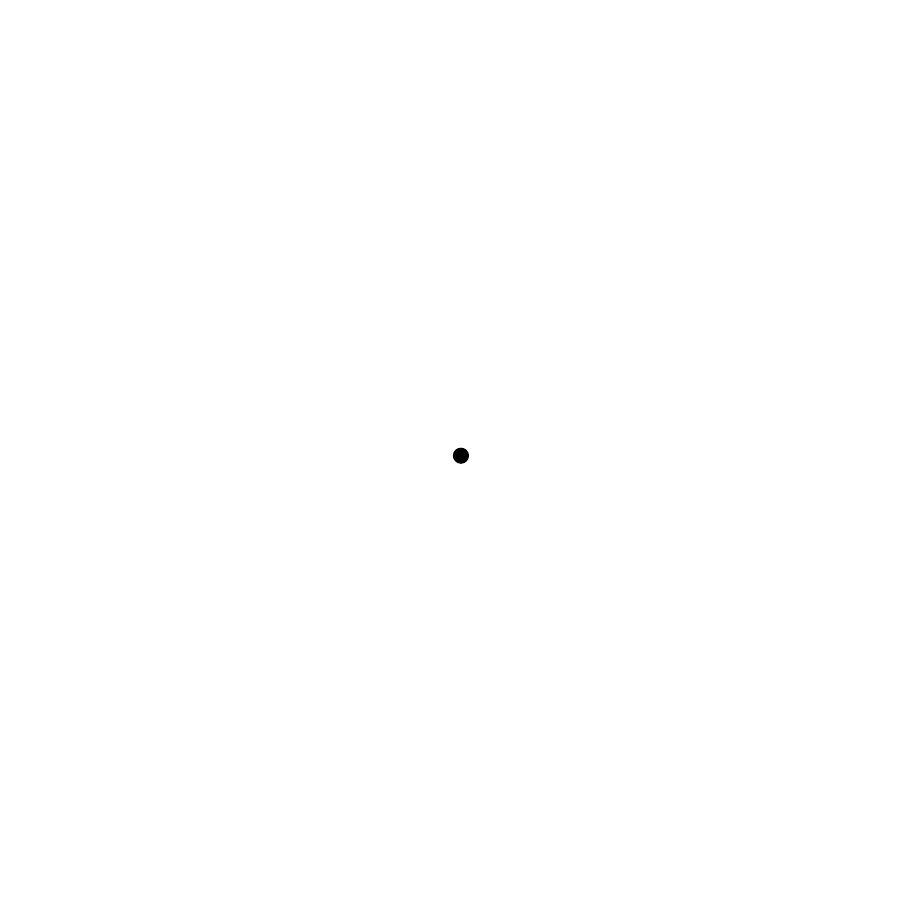
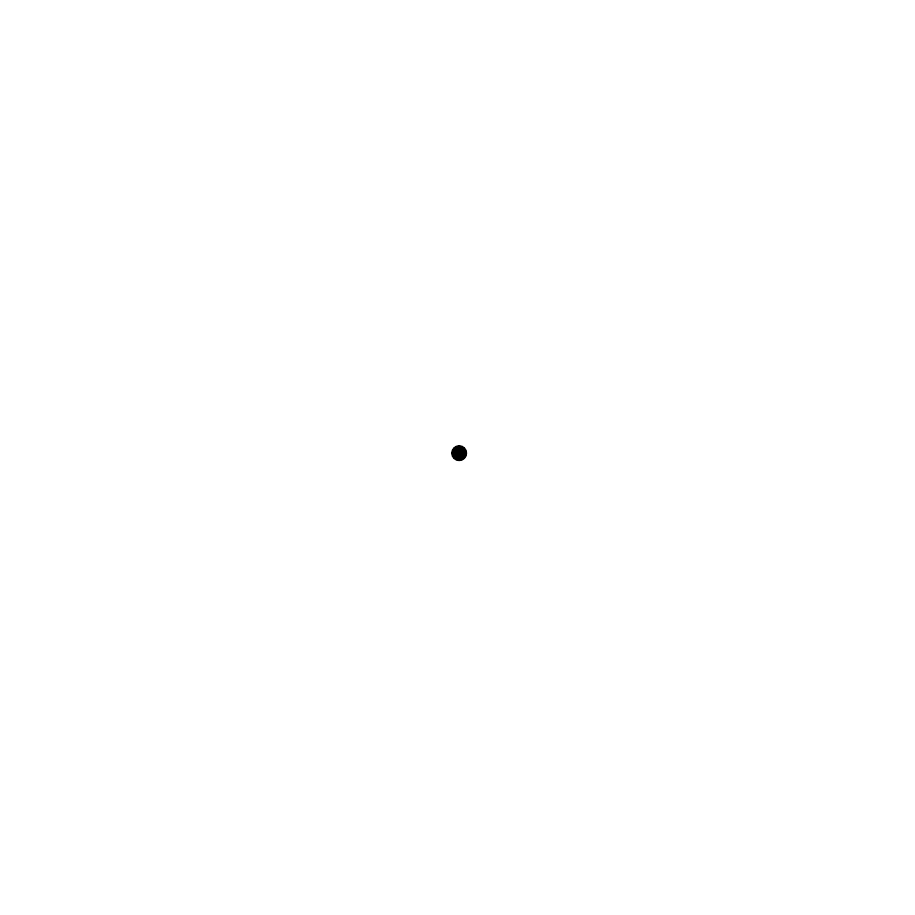
## Unit 4 Lesson 10: Solving Problems with Trigonometry

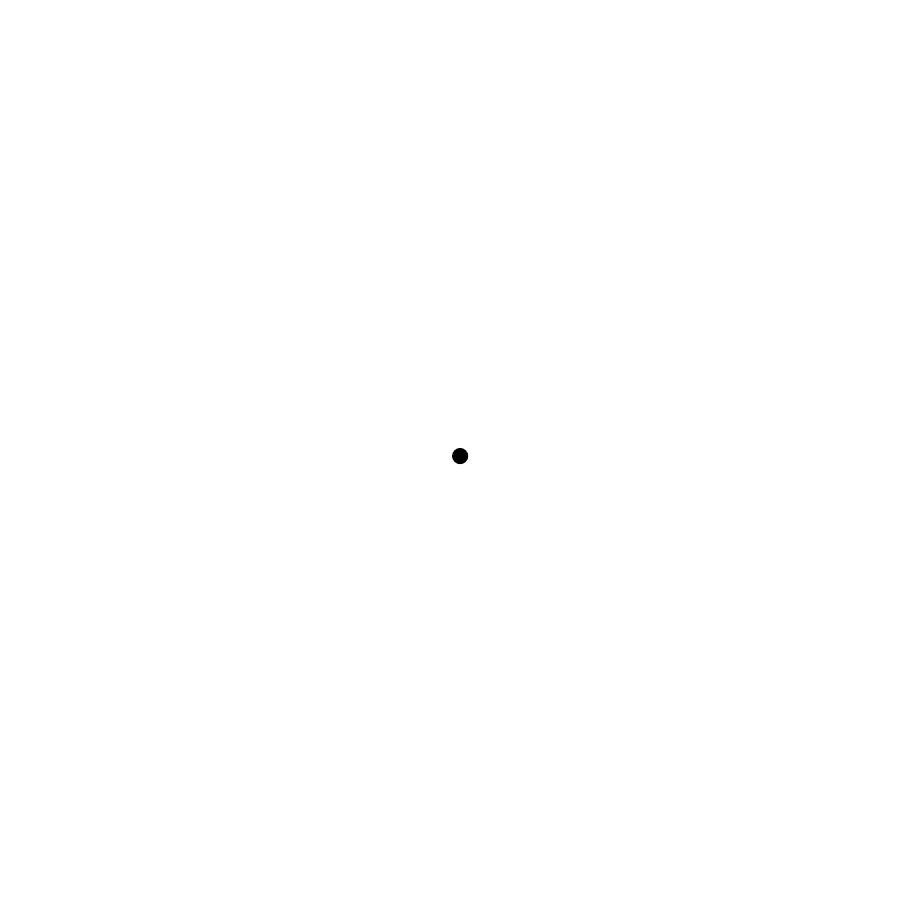
### 1 Notice and Wonder: Practicing Perimeter (Warm up)

#### Student Task Statement

What do you notice? What do you wonder?



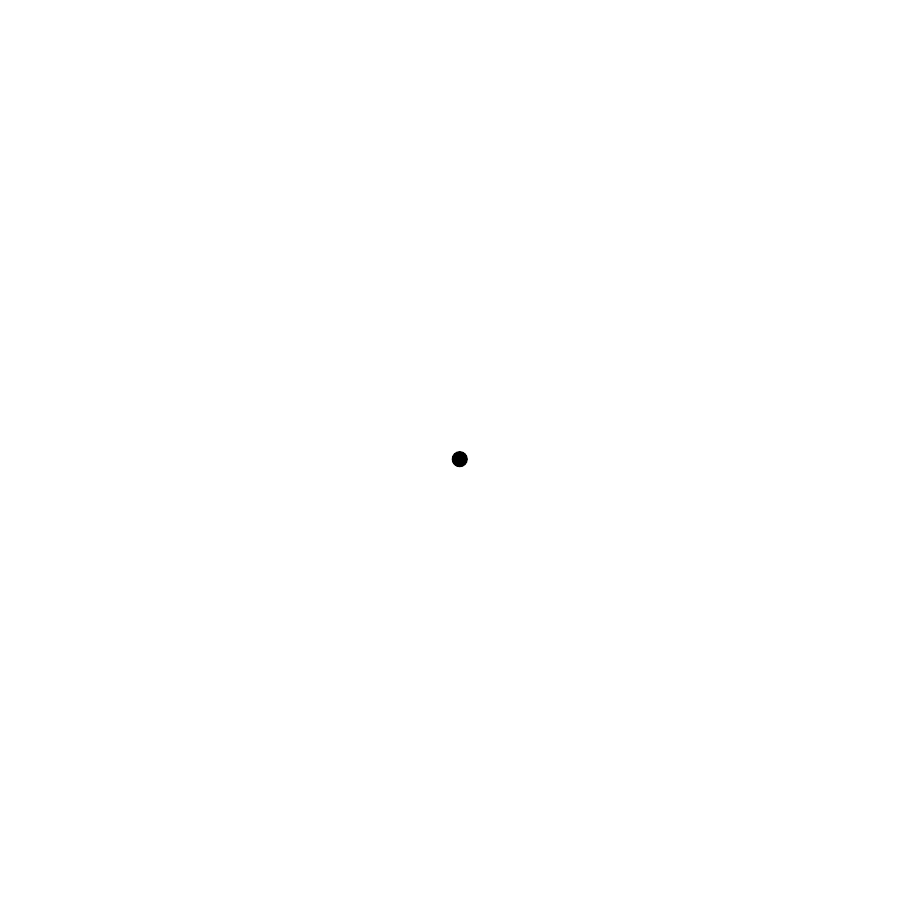




### 2 Growing Regular Polygons

#### 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.

* 

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

### 3 Gentle Descent

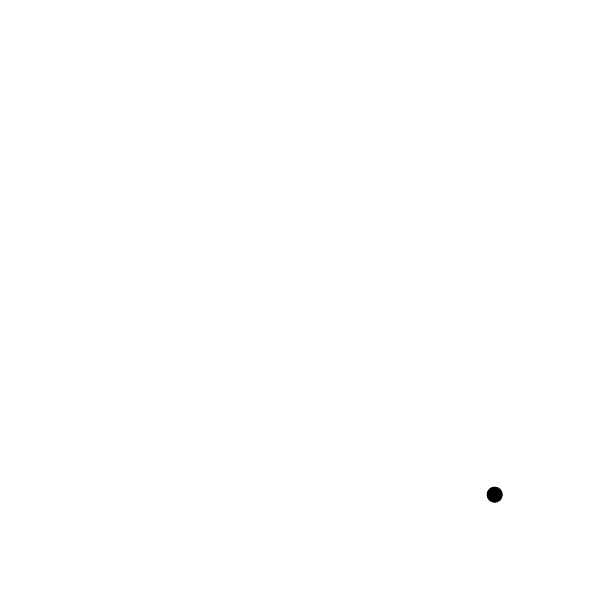
#### Student Task Statement

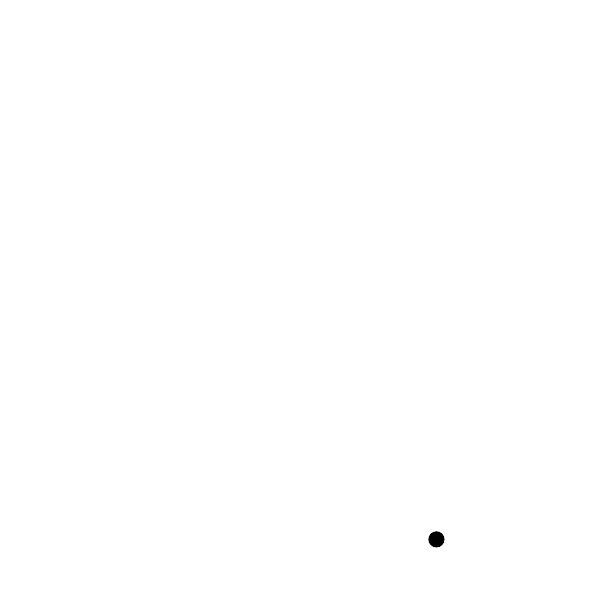
An airplane travels 150 miles horizontally during a decrease of 35,000 feet vertically.

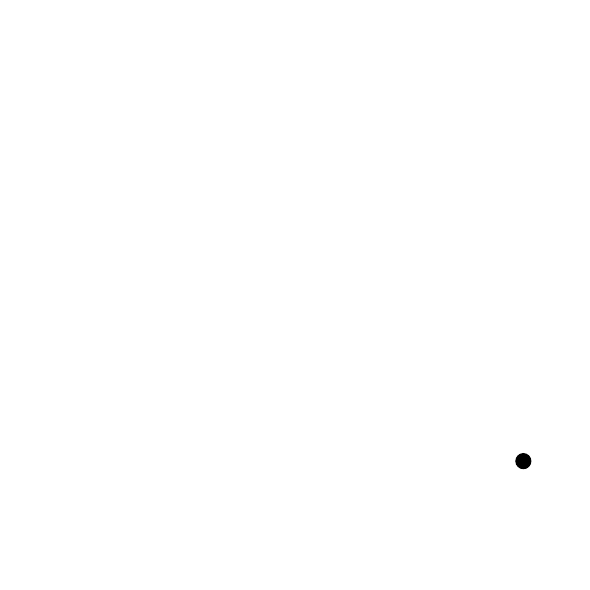
1. What is the angle of descent?
2. How long is the plane's path?



#### Images for Activity Synthesis

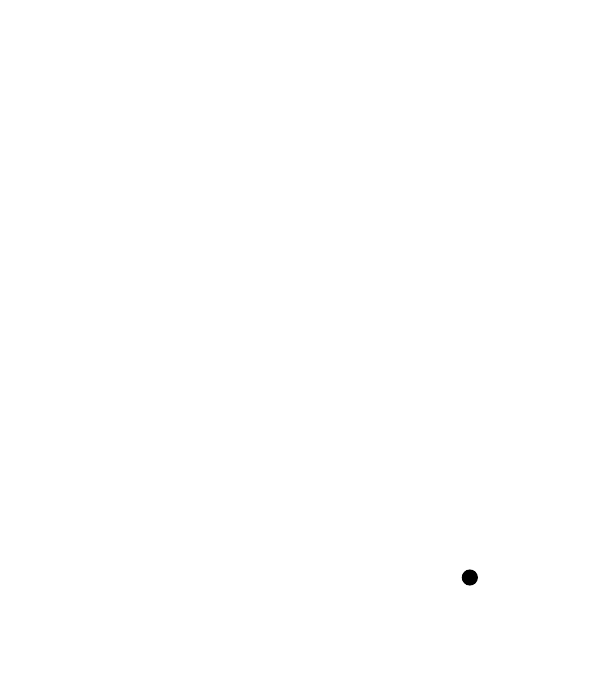














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