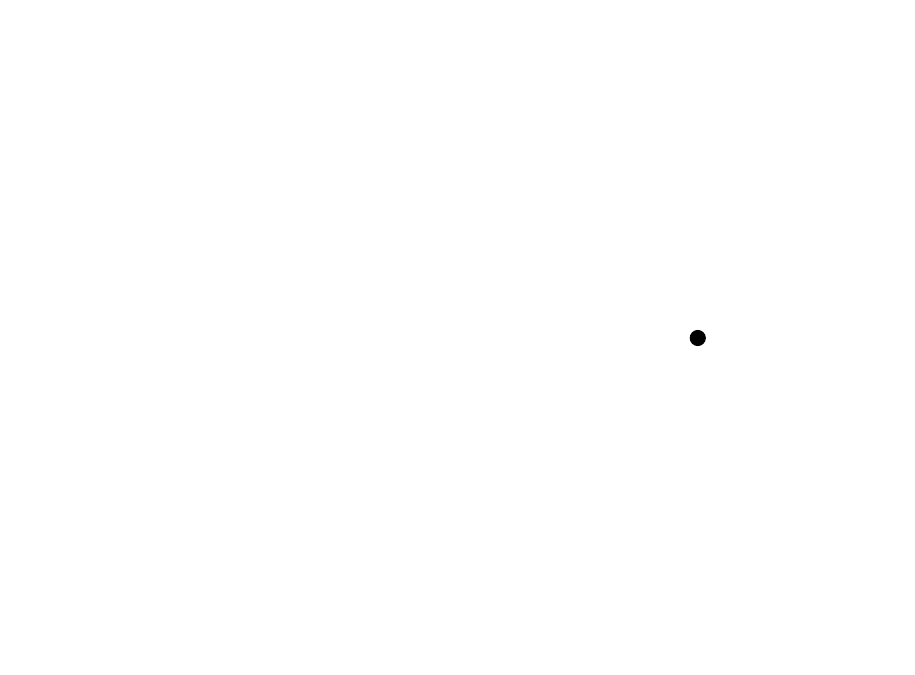
## Unit 3 Lesson 5: Splitting Triangle Sides with Dilation, Part 1

### 1 Notice and Wonder: Midpoints (Warm up)

#### Student Task Statement

Here’s a triangle with midpoints , and .

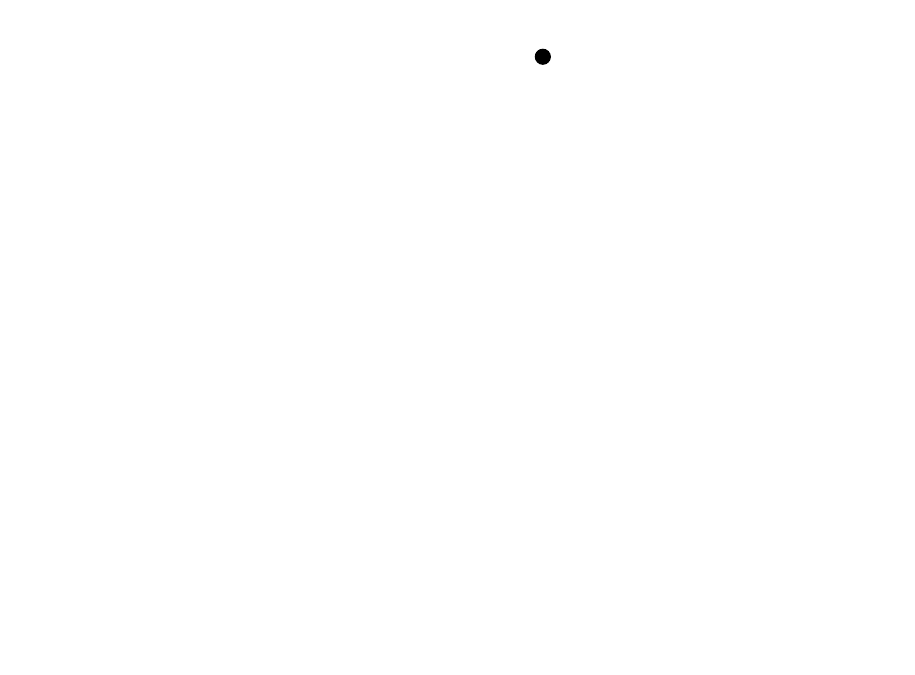


What do you notice? What do you wonder?

### 2 Dilation or Violation?

#### Student Task Statement

Here’s a triangle . Points  and  are the midpoints of 2 sides.

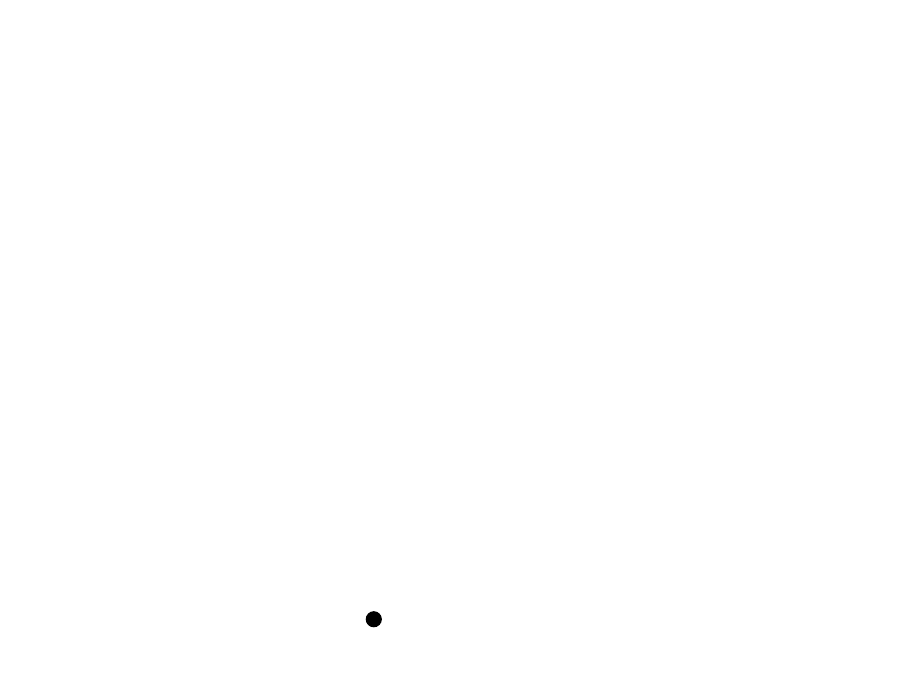


1. Convince yourself triangle is a dilation of triangle . What is the center of the dilation? What is the scale factor?
2. Convince your partner that triangle is a dilation of triangle , with the center and scale factor you found.
3. With your partner, check the definition of dilation on your reference chart and make sure both of you could convince a skeptic that definitely fits the definition of dilation.
4. Convince your partner that segment is twice as long as segment .
5. Prove that . Convince a skeptic.

### 3 A Little Bit Farther Now

#### Student Task Statement

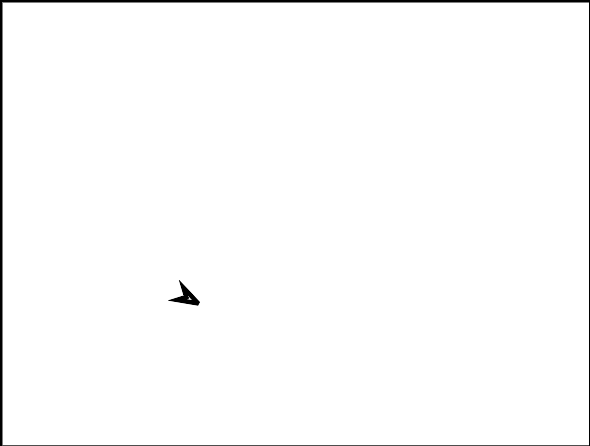
Here’s a triangle . is of the way from to . is of the way from to .



What can you say about segment , compared to segment ? Provide a reason for each of your conjectures.

#### Activity Synthesis

so





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