Mathematics Class Slides

Bronx Early College Academy

Christopher J. Huson PhD

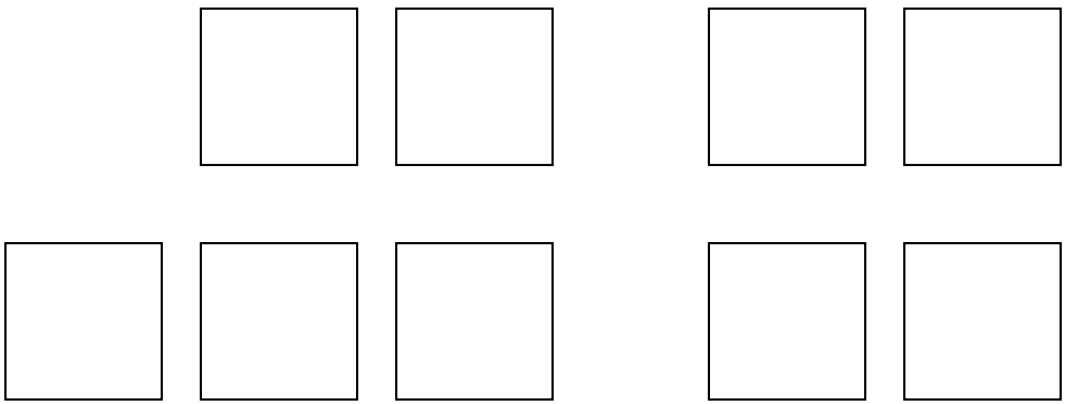
16 February 2022

7.13 Similarity - Open Middle intro, 16 February 2022

Open Middle problem (fun)

Use digits from 0 to 9. Using a digit no more than once.

The first two angle measures are complementary. The second two angles supplementary. (degrees)



Do Now: Use integers from 1 to 9, at most once each.

Place a digit in each box to create three numbers whose sum is closest to 1000.

$$\square\square\square + \square\square\square + \square\square\square$$

Do Now: Use integers from -9 to 9, at most once each. Place a digit in each box to create endpoints for different line segments whose midpoint is $(1, 3)$.

1. $\overline{AB}$ should have a positive slope, and $\overline{CD}$ should have a negative slope.

A($\square$, $\square$) – B($\square$, $\square$)
C($\square$, $\square$) – D($\square$, $\square$)

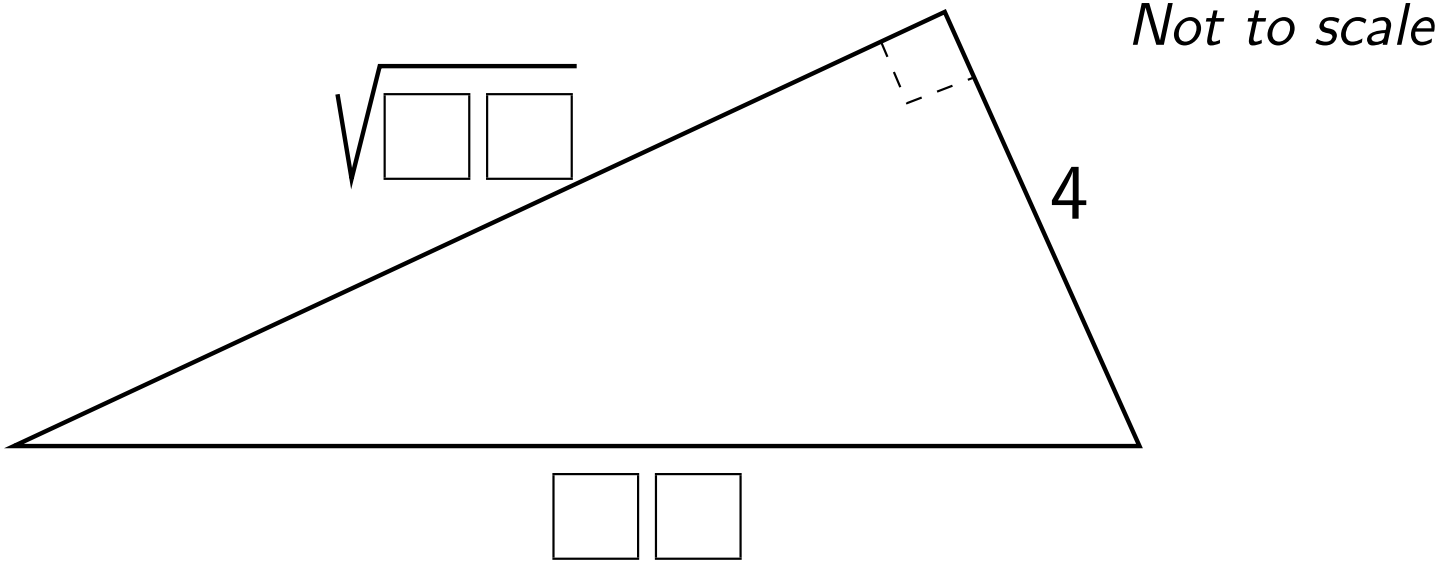
2. Create endpoints for the longest possible line segment $\overline{EF}$ whose midpoint is $(1, 3)$.

E($\square$, $\square$) – F($\square$, $\square$)
You may reuse all the integers for each line segment.

DoNow: Fill the boxes to find lengths for the missing sides.

HSG.SRT.C.8 Use the Pythagorean theorem to solve right triangles Thursday 17 February

Use the digits 0 to 9 at most one time each. Find two possible triangles. (you may reuse the digits for each triangle)



Challenge: Find the longest possible legs.