

Mathematics Class Slides

Bronx Early College Academy

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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 -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.

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.

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