## Unit 2 Lesson 12: Polynomial Division (Part 1)

### 1 Notice and Wonder: A Different Use for Diagrams (Warm up)

#### Student Task Statement

What do you notice? What do you wonder?

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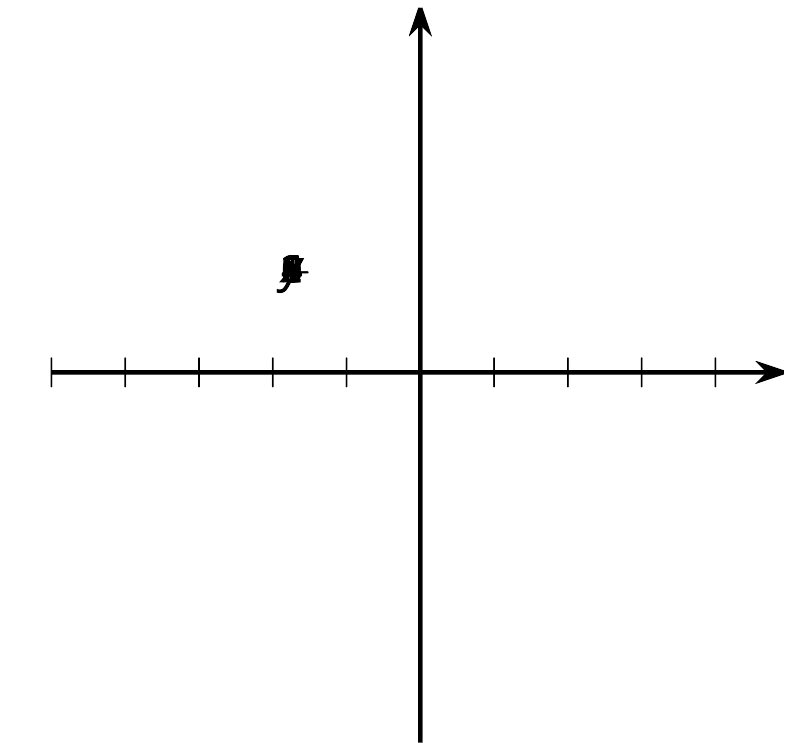
### 2 Factoring with Diagrams

#### Student Task Statement

Priya wants to sketch a graph of the polynomial defined by . She knows , so she suspects that could be a factor of and writes  and draws a diagram.

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1. Finish Priya’s diagram.
2. Write as the product of and another factor.
3. Write as the product of three linear factors.
4. Make a sketch of .



### 3 More Factoring with Diagrams

#### Student Task Statement

Here are some polynomial functions with known factors. Rewrite each polynomial as a product of linear factors. Note: you may not need to use all the columns in each diagram. For some problems, you may need to make another diagram.

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* (Hint: )

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