

## Algebra

### Activity 1a - Multiplication via the FOIL Method

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#### Part I

1. Multiply 
$$\begin{array}{r} 21 \\ \times 23 \\ \hline \end{array}$$

2. Multiply  $(20 + 1)(20 + 3)$

Explain why problems 1) and 2) are the same process.

If you learned other ways to multiply two-digit numbers, show them to your group and explain why it is the same process as problems 1) and 2)

3. Multiply  $(2x + 1)(2x + 3)$

Explain why this is the same process as problems 1) and 2)

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#### Part II

Expand the following:

1.  $(x + 1)(x + 1)$

2.  $(x + 1)^2$

3.  $(x + 1)(x + 1)(x + 1)$

4.  $(x + 1)^3$

5.  $(x + 1)^4$

6.  $(x + 1)^5$

Do you see a pattern?