|  |  |
| --- | --- |
| **Multiplying Polynomials (5.2)** | **Math 98** |

|  |  |
| --- | --- |
| Review |  |

Example 1: Multiply and simplify

|  |  |
| --- | --- |
| 1.
 | 1.
 |
| 1.
 | 1.
 |

Example 1 continued:

|  |  |
| --- | --- |
| 1.

 |  |
| 1.
 |  |

Example 2: Sometimes it can be easier to multiply vertically.

1. 

FOIL it before it foils you.

Example 3: Multiply

|  |  |
| --- | --- |
| 1.
 | 1.
 |
| 1.
 |  |

Question: Does ? Discuss this with your neighbors and figure it out.

It’s worth memorizing the square of a binomial (*perfect squares*)l:

* 
* 

The picture can help.

Example 4:

|  |  |
| --- | --- |
| 1.
 | 1.
 |
| 1.
 |  |

Explore the *difference of squares* to find the pattern:

|  |  |
| --- | --- |
| 1.
 | 1.
 |

The *difference of squares* formula:

Example 5: Multiply

|  |  |
| --- | --- |
| 1.
 | 1.
 |
| 1.
 | 1.
 |

Example 6: Multiply

|  |  |
| --- | --- |
| 1.
 |  |

Connection with functions: The given graph shows . Do you see any connections between the symbolic representation and the graph?



Example 7: Suppose . Find the following:

|  |  |
| --- | --- |
| 1.
 | 1.
 |
| 1.
 | 1.
 |
| 1.
 |  |