## Lesson 8: Multiplying Expressions

* Let’s explore multiplication strategies.

### 8.1: Math Talk: Combining the Similar Numbers

Evaluate mentally.

### 8.2: A Method for Multiplying

Here is a method for multiplying 97 and 103:

97 is

103 is

So

|  |  |  |
| --- | --- | --- |
|  | 100 | -3 |
| 100 | 10,000 | -300 |
| 3 | 300 | -9 |

1. Explain how this diagram is used to compute .
2. Draw a similar diagram that helps you mentally compute . What is the result? What multiplication problem did you just solve?
3. Use this method to compute:
4. Create a challenge problem for your partner, that could use this method. Create a diagram that shows the answer before giving the problem to your partner.

### 8.3: Find the Missing Pieces

Complete each diagram. Write some equivalent expressions based on the diagram.

|  |  |  |
| --- | --- | --- |
|  | 1. 10 | * 5 |
| * 10 | * 100 |  |
|  |  | * 45 |

|  |  |  |
| --- | --- | --- |
|  |  | 1. 7 |
| * 10 |  |  |
| * -7 | * -70 |  |

|  |  |  |
| --- | --- | --- |
|  |  | * 8 |
|  |  |  |
| * -8 |  |  |

|  |  |  |
| --- | --- | --- |
|  |  | * -9 |
|  |  |  |
| * 9 |  |  |

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
|  | 1. 7 |  |
|  |  |  |
| * 7 | * 49 |  |



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