

**Calculating and Simplifying Numerical Expressions**

There are two types of Calculating and Simplifying. You can perform these operations on the whole expression or on part of the expression. Highlight the part of the expression you would like LiveMath to operate on then click on the Calculate or Simplify button in the palette.

1) The Calculate key looks like this :



2) The Simplify button looks like this :



Here are some examples. Think about what must have been highlighted prior to performing the Calculate operation.



$$\square 2+4\cdot 3+5$$

$$\triangle 2+4\cdot 3+5 = 2+12+5 \quad \text{Calculate}$$

$$\triangle 2+4\cdot 3+5 = 2+17 \quad \text{Calculate}$$

$$\triangle 2+4\cdot 3+5 = 19 \quad \text{Calculate}$$



$$\square 2+4\square 3\cdot 5\square 8+3$$

$$\triangle 2+4\square 3\cdot 5\square 8+3 = 6\square 3\cdot 5\square 8+3 \quad \text{Calculate}$$

$$\triangle 2+4\square 3\cdot 5\square 8+3 = 6\square 3\cdot 5\square 5 \quad \text{Calculate}$$

$$\triangle 2+4\square 3\cdot 5\square 8+3 = 6\square 15\square 5 \quad \text{Calculate}$$

$$\triangle 2+4\square 3\cdot 5\square 8+3 = \square 9\square 5 \quad \text{Calculate}$$

$$\triangle 2+4\square 3\cdot 5\square 8+3 = \square 14 \quad \text{Calculate}$$



Now It's Your Turn... Follow the directions below to get hands on experience.



1.

Enter in the following expressions into a statement. Highlight the indicated part of the expression and then calculate.

1) $4 + 6 - 7 + 3 * 5 - 6 + 2 * 3 - 8$
Highlight $4 + 6$

2) $4 + 6 - 7 + 3 * 5 - 6 + 2 * 3 - 8$
Highlight $3 * 5$

3) $4 + 6 - 7 + 3 * 5 - 6 + 2 * 3 - 8$
Highlight $- 6 + 2 * 3$

**2.**

LiveMath knows the order of operations: Multiply and divide first from left to right. Then add and subtract from left to right.

Enter in the following expressions. Highlight the indicated part of the expression and then calculate.

1) $4 + 6 - 7 + 3 * 5 - 6 + 2 * 3 - 8$

Highlight $- 7 + 3$

Do not highlight the 5 in $3 * 5$

**3.**

Enter in these expressions. Calculate and Simplify them as indicated:

1) $1 + 6 - 8 + 3 * \frac{4}{5} + 2 - 7$

Highlight $3 * \frac{4}{5}$

a) Calculate

b) Simplify

Did Calculate and Simplify have the same effect on $3 * \frac{4}{5}$?