

# Order of Operations

1. Calculate anything within parentheses ( ).	$20 - 2 \times 5 + 9$	$(20 - 2) \times 5 + 9$
2. Do multiplications and divisions from left to right.	$= 20 - 10 + 9$	$= 18 \times 5 + 9$
3. Do additions and subtractions from left to right.	$= 10 + 9 = 19.$	$= 90 + 9 = 99$

1. The following calculation has five operations.  
In which order are they done?

$$650 - 9 \times (23 + 31) + 211$$

- a. First calculate the sum \_\_\_\_ + \_\_\_\_.
- b. Next multiply that sum by \_\_\_\_.
- c. Subtract that result from \_\_\_\_\_.
- d. Lastly add \_\_\_\_ to the subtraction result.

2. Multiply in any order. Try to find the easiest, of course.

<b>a.</b> $2 \times 3 \times 300 =$ $10 \times 5 \times 3 =$	<b>b.</b> $6 \times 5 \times 7 =$ $5 \times 8 \times 50 =$	<b>c.</b> $40 \times 10 \times 8 =$ $10 \times 0 \times 40 =$	<b>d.</b> $20 \times 70 \times 2 =$ $70 \times 4 \times 20 =$
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3. Solve mentally.

<b>a.</b> $500 - 2 \times 200 =$ $500 + 2 \times 200 =$	<b>b.</b> $70 \times 30 + 2,000 =$ $70 \times 30 - 2,000 =$	<b>c.</b> $60 \times 10 + 20 \times 20 =$ $30 \times 40 - 40 \times 20 =$
<b>d.</b> $8 \times 200 - 200 - 500 =$ $800 - 2 \times 20 + 100 =$	<b>e.</b> $90 + 15 + 2 \times 7 =$ $90 \times 10 + 120 - 40 =$	<b>f.</b> $500 - 7 \times 70 - 10 =$ $10 \times 7 \times 5 + 100 + 250 =$

4. Some more with parentheses.

<b>a.</b> $(500 - 200) \times 2 =$ $(500 + 200) \times 2 =$	<b>b.</b> $70 \times (30 + 20) =$ $70 \times (30 - 20) =$
<b>c.</b> $60 \times (10 + 20) \times 2 =$ $30 \times (40 - 40) \times 2 =$	<b>d.</b> $8 \times (200 - 100) - 500 =$ $(800 - 200) \times 20 + 100 =$
<b>e.</b> $90 + (15 + 5) \times 7 =$ $90 \times (10 + 20) - 40 =$	<b>f.</b> $(500 - 50 - 50) \times 7 - 100 =$ $10 \times 7 \times (50 + 30) + 200 =$