

# Evaluating Expressions

Brackets and parentheses are both used to show groupings.

Brackets are used to avoid double parentheses: [( instead of ((.

Evaluate expressions according to the order of operations.

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| 1. Evaluate inside parentheses, then evaluate inside brackets. | $2.3^2 + [(9 \times 0.4) + (3 \times 0.8)] \times 1.2$<br>$2.3^2 + [3.6 + 2.4] \times 1.2$<br>$2.3^2 + 6 \times 1.2$ |
| 2. Evaluate terms with exponents.                              | $2.3^2 + 6 \times 1.2$<br>$5.29 + 6 \times 1.2$  |
| 3. Multiply and divide from left to right.                     | $5.29 + 6 \times 1.2$<br>$5.29 + 7.2$  |
| 4. Add and subtract from left to right.                        | $5.29 + 7.2$<br>$12.49$  |

Evaluate each expression.

1.  $(4.8 \div 2) \times 5$

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2.  $3.6 + (3 \times 9.6 - 4.8)$

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3.  $[(6.2 \times 8.4) - 9.28]$

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4.  $[7 \times (9.6 \div 3)] + 12.4$

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5.  $6 \times [(6 \times 2.3) + 3.9]$

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6.  $2^4 \div [(3.35 \times 0.8) + 5.32]$

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7.  $9.6 + [(3.1 \times 2) - 2.3] + 4^2$

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8.  $6^2 - 9 \div [(0.24 \times 5) + (0.66 \times 5)]$

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9. How would you use estimation to evaluate this expression:

$10.2 \times [(2 \times 3.7) + 8]$

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