

MTH 100: Intermediate Algebra

Order of Operations (PEMDAS)



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P	Parenthesis: Do all groupings in parenthesis and/or brackets	(), { }, []	Examples: $(2+3) = 5$ $[(2+3)-(2-1)] = (5-1) = 4$
E	Exponents: Do all exponents	x^2	Example: $2^3 = 2 * 2 * 2 = 4 * 2 = 8$ $3^2 = 3 * 3 = 9$
M	Multiply: Multiple from left to right	$2 * 3$ or $2(3)$ or $2x3$	Examples: $(3 * 2) + 1 = 6 + 1 = 7$ $2(5) - 4 = 10 - 4 = 6$
D	Divide: Divide from left to right	$4/2$ Or $4 \div 2$	Examples: $(8/2) - 3 = 4 - 3 = 1$ $(10 \div 2) + 3 = 5 + 3 = 8$
A	Add: Add from left to right	$5 + 2$	Examples: $7 + 4 + 2 - 5 = 11 + 2 - 5 = 13 - 5 = 8$ $7 + 3 - 2 = 10 - 2 = 8$
S	Subtract: Subtract from left to right	$9 - 4$	Examples: $7 - 3 - 1 + 9 = 4 - 1 + 9 = 3 + 9 = 12$ $9 - 4 + 2 = 5 + 2 = 7$

EXAMPLE:

$$(17+3)+2^3 \div 4*2$$

$$(17+3) + 2^3 \div 4 * 2$$

1. Parenthesis

$$20 + 2^3 \div 4 * 2$$

2. Exponent

$$20 + 8 \div 4 * 2$$

3. Divide

$$20 + 2 * 2$$

4. Multiply

$$20 + 4$$

5. Add

$$= 24$$