Order of Operations - Examples

Problem	Steps to Take
6 + 5 ● 3	Multiplication first
5 + 15	Addition
20	

Problem	Steps to Take
4^2 ÷ 8 ● 2	Exponent first
16 ÷ 8 ● 2	Division
2 ● 2	Multiply
4	

Problem	Steps to Take
$2+3\bullet 7-10\div 2$	Multiply
2 + 21 – 10 ÷ 2	Division
2 + 21 – 5	Addition/Subtraction
23 - 5	
18	

Problem	Steps to Take
(2 + 3 ● 4) ÷7 + 3	Parentheses first
(2 + 3 ● 4)	Multiplication
2 + 12	Addition
14	
14 ÷ 7 + 3	Division
2 + 3	Addition
5	

Problem	Steps to Take
35 ÷ (6 – 1) – 5 + 6 ÷ 2	Parentheses first
(6 – 1)	Subtraction
5	
35 ÷5 – 5 + 6 ÷ 2	Division
7 – 5 + 3	Addition/Subtraction
2 + 3	
5	

PEMDAS

Parentheses

Exponents

Multiplication or **D**ivision
Starting left to right

Addition and **S**ubtraction
Follow your sign rules

How to Remember *PEMDAS*

Memorize the following phrase:

Please

Excuse

My

Dear

Aunt

Sally

Turn over for more examples.

Problem	Steps to Take
14(2 + 3) – 65 + 5	Parentheses first
(2 + 3)	
5	
14(5) – 65 + 5	Multiplication
70 – 65 + 5	Addition/Subtraction
5 + 5	
10	

Problem	Steps to Take
3[4 + 2(6 ÷ 3 ● 2)]	Inner most Parentheses
6 ÷ 3 ● 2	Division then Multiplication
2 ● 2	
4	
3[4 + 2(4)]	Inside brackets - Multiply
3[4 + 8]	Inside brackets - Addition
3[12]	Multiply
36	

Problem	Steps to Take
$(4^2 – 7) ● 2^3 – 8 ● 5 – 10$	Parentheses first
$(4^2 – 7)$	Exponent
16 - 7	Subtraction
9	
$(9) ● 2^3 – 8 ● 5 – 10$	Exponent
(9) ● 8 – 8 ● 5 – 10	Multiplication – left to right
72 – 40 – 10	Addition/Subtraction
32 - 10	
22	

Problem	Steps to Take
$16 + 3(17 + 2^3 ÷ 2^2 – 4)$	Parentheses first
$(17 + 2^3 ÷ 2^2 – 4)$	Exponents
(17 + 8 ÷ 4 – 4)	Division
(17 + 2 – 4)	Addition/Subtraction
19 – 4	
15	
16 + 3(15)	Multiply
16 + 45	Addition
61	