

**SIMPLIFIED MATHEMATICS UNIT
SUPPORTING MATH ESSENTIALS 1**

BEDMAS

$$3^3 + (25 + 15) \times 15 - 21 = \square$$

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Grade / Topic Level : Grades 8 - 10

BEDMAS

Order of Number Operations 1

What is Order of Number Operations?

When there is a series of numbers that can be added, subtracted, divided or multiplied, the order in which you do these operations is important. It is important because you could get different answers for the same problem. **REMEMBER : In math there is ONLY ONE CORRECT ANSWER !!**

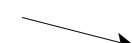

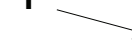
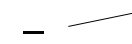
For example, look at these two problems. Number 1 is solved by just moving through the problem from left to right. Number 2 is solved using BEDMAS.

$$\begin{aligned} 1) \quad & 8 + 7 \div 3 - 1 \times 4 = \\ & 15 \div 3 - 1 \times 4 = \\ & 5 - 1 \times 4 = \\ & 4 \times 4 = 16 \end{aligned}$$

$$\begin{aligned} 2) \quad & 8 + 6 \div 3 - 1 \times 4 = \\ & 8 + 2 - 1 \times 4 = \\ & 8 + 2 - 4 = \\ & 10 - 4 = 6 \end{aligned}$$

Number 2 has the correct answer because the rules for BEDMAS say you must do any multiplying and dividing **FIRST**, before doing any adding and subtracting.

Rules for BEDMAS

- B** Brackets : () and [] Do round brackets first, square brackets second
- E** Exponents : 3^3 or 7^3 or x^5 or m^2 - the small numbers are exponents
- D** Division : \div  Do whichever comes first in the equation
- M** Multiplication : \times 
- A** Addition : $+$  Do whichever comes first in the equation
- S** Subtraction : $-$ 

Order of Number Operations 1 (continued)

Hidden Multiplication Signs

If you see problems that look like this : $4(5 - 2)$ or $7(4 \times 5)$ or $11(5 + 2)$: there is a hidden multiplication sign (\times) between the outside number and the bracket.

So : $4(5 - 2)$ really means $4 \times (5 - 2)$ and
 $7(4 \times 5)$ really means $7 \times (4 \times 5)$ and
 $11(5 + 2)$ really means $11 \times (5 + 2)$

Examples :

$$\begin{array}{l} 1) \quad 36 \div 2 \times 4 = \\ \quad 18 \times 4 = \underline{72} \end{array}$$

Do the division first,
then the multiplication.

$$\begin{array}{l} 2) \quad 4(2 + 9) = \\ \quad 4(11) = \underline{44} \end{array}$$

Do the inside brackets first,
then the multiplication. Don't forget
the hidden multiplication sign.

$$\begin{array}{l} 3) \quad 24 \div (2)(3) = \\ \quad 24 \div 6 = \underline{4} \end{array}$$

$$\begin{array}{l} 4) \quad (8)(3) + (2)(10) = \\ \quad 24 + 20 = \underline{44} \end{array}$$

$$\begin{array}{l} 5) \quad \text{do first } \downarrow \\ \quad 8 + (12 \div 4 + 7) = \\ \quad 8 + (3 + 7) = \\ \quad 8 + (10) = \\ \quad 8 + 10 = \underline{18} \end{array}$$

$$\begin{array}{l} 6) \quad \text{do first } \downarrow \\ \quad 6 + 50 \div 5 - 2 + 4 = \\ \quad 6 + 10 - 2 + 4 = \\ \quad 16 - 2 + 4 = \\ \quad 14 + 4 = \underline{18} \end{array}$$

Order of Number Operations 1 (continued)

Now You Try. SHOW ALL OF YOUR WORK.

Name : _____

Date : _____

1) $12 \div 6 \times 11 =$

2) $9 (8 + 9) =$

3) $8 + 7 (12 - 3) =$

4) $32 \div (4) (4) + 6 =$

5) $(7) (13) + (5) (11) - 12 =$

6) $22 + 72 \div 9 + 11 - 9 =$