

## Chapter- 12

## Simplification - BODMAS Rule

## STUDY NOTES

## This lesson will help you to:

- Know the order of solving mathematical operations.
- Calculate the value when more than one operation is given.
- Know the types of brackets
- Calculate value by using the correct ordering rule : B O D M A S

**Simplification:**

In math, simplification is the act of organizing operations according to the order and finding the value.

**DMAS RULE**

**D ~ Divide**  $\div$

**M ~ Multiply**  $\times$

**A ~ Add**  $+$

**S ~ Subtract**  $-$

$5 + 9 \div 3 \times 4 - 2 = ?$

**B** Brackets  $()$

**O** OF  $\times$

**D** Divide  $\div$  OR  $\times$

**M** Multiply  $\times$

**A** Add  $+$  OR  $-$

**S** Subtract  $-$

**TYPES OF BRACKETS:**

1. Bar bracket
2. Common bracket/ Parentheses
3. Curly Bracket
4. Square bracket

Symbol	Name
–	vinculum or bar
()	parentheses as small brackets
{}	Braces or curly brackets
[]	square brackets

➤ RULES OF SIMPLIFICATION:

- ❖ Remove the brackets by solving all the operations inside it.
- ❖ Perform operations involving 'of'
- ❖ Then follow D M A S

Example:  $92 \div [18 + 4 \{ 6 + ( 12 - \overline{10 + 1} ) \}]$  [ bar bracket  $10 + 1 = 11$  ]  
 $= 92 \div [18 + 4 \{ 6 + ( 12 - 11 ) \}]$  [ common bracket  $12 - 11 = 1$  ]  
 $= 92 \div [18 + 4 \{ 6 + 1 \}]$  [ curly bracket  $6 + 1$  ]  
 $= 92 \div [18 + 4 \times 7]$  [ square bracket  $18 + 4 \times 7 = 18 + 28 = 46$  ]  
 $= 92 \div 46$  [ divide  $92 \div 46 = 2$  ]  
 $= 2$

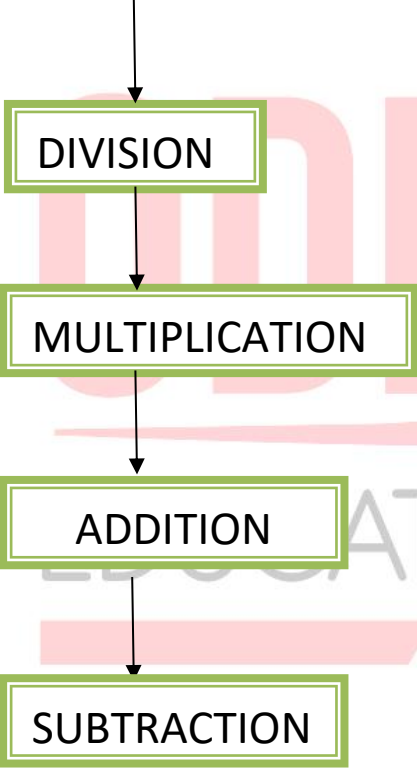
POINTS TO REMEMBER:

- In mathematics we follow **DMAS rule** to solve sums involving more than one operation.
- DMAS stands for **Division – Multiplication- Addition – Subtraction**.
- BODMAS stands for **Bracket Of Division Multiplication Addition Subtraction**
- Sums involving **brackets** will be solved first.
- There are **4 types** of brackets.
- The order of solving sums involving brackets is :
  - Bar bracket
  - Common bracket
  - Curly bracket
  - Square bracket

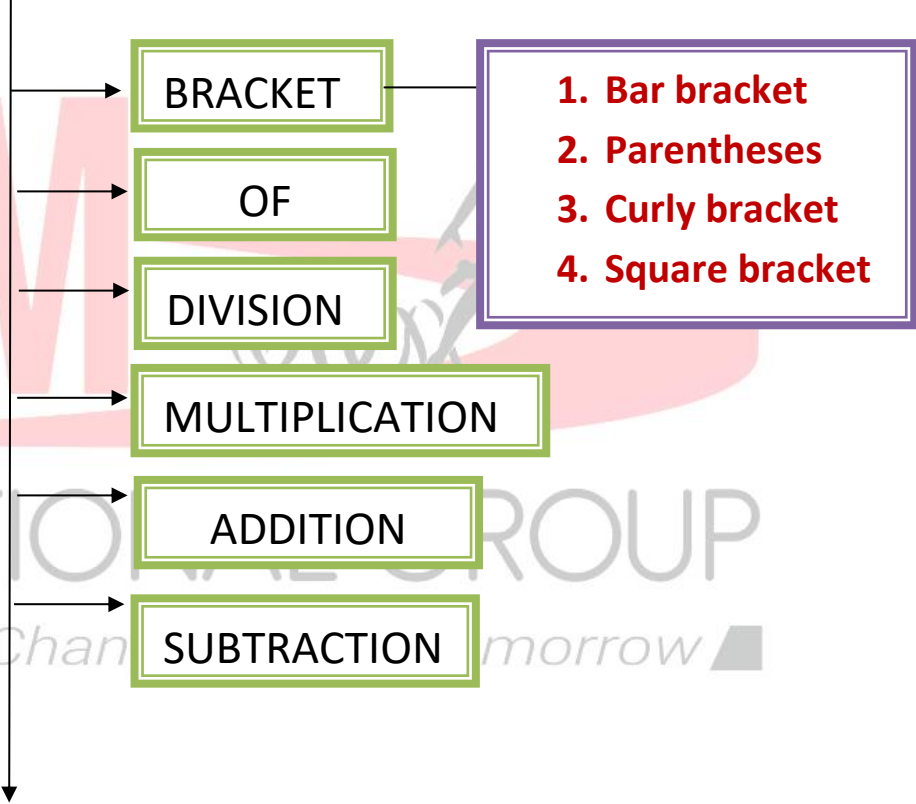
# MIND MAP

## SIMPLIFICATION

### DMAS



### BODMAS



- 1. Bar bracket
- 2. Parentheses
- 3. Curly bracket
- 4. Square bracket