

Chapter- 12

Simplification - BODMAS Rule

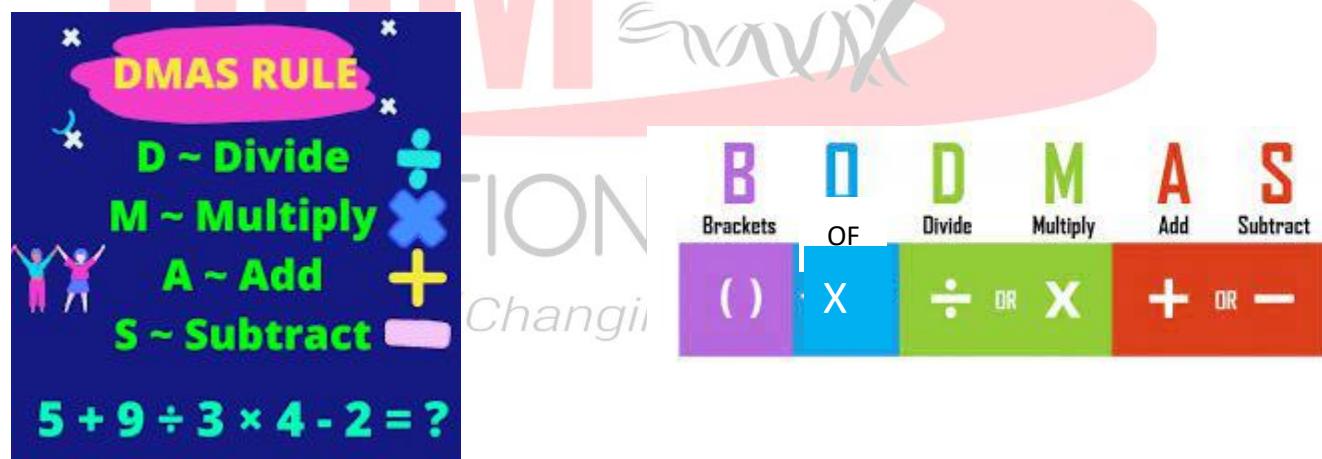
STUDY NOTES

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.



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

D M A S

DIVISION

MULTIPLICATION

ADDITION

SUBTRACTION

B O D M A S

BRACKET

OF

DIVISION

MULTIPLICATION

ADDITION

SUBTRACTION

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