Simplifications

Time Spent : 00 Hours 04 Minutes 53 Seconds

Introduction

BODMAS Rule –

- BODMAS is an Acronym that is used to remember the order used to solve mathematical problems involving operations.
- With the help of BODMAS, we get to know and remember the correct order used to find the correct value of a given expression.

The BODMAS Acronym Stands For –

- Brackets
- Orders
- Division
- Multiplication
- Addition
- Subtraction
- So, The following steps are the steps used to solve Simplification Questions, using the BODMAS rule. –

Brackets - According to BODMAS, first solve the values inside the brackets starting from left to right.

Example – 5× (6+2) =? Here first, solve the values inside the bracket and after that multiply it by 5 to get the correct answer. 5×8 =? So the correct answer is 40.

Orders – After solving the brackets, in next step, you should evaluate exponents (power or a square root also known as orders).

Example – 4^2+9 =? Here, you need to evaluate the square of 4 and then add 9 to it. 4×4+9=? So the correct answer is 25.

Division and Multiplication – After completing the above two rules, you need to perform the Division and Multiplication. Both are equally ranked so while solving the expression, apply the rule from left to right.

Example – 7×5÷5+8 =? While going from left to right, firstly multiply 7 by 5 and then the result is divided by five. – 35÷5+8 =? Or 7+8 =? So, the correct answer is 15.

Addition and Subtraction – The last step of Simplification is Addition or Subtraction, which are equally ranked, solve the expression from left to right.

Example – 7+4-1+5 =? After going through left to right in the above-mentioned Simplification Question we get the following values. – 11-1+5 or 10+5 or 15 So, the final answer after applying Addition and Subtractions is 15.

- Now you are aware of the BODMAS Formula which helps to solve the Simplification Questions easily.
- As there are different types of brackets used in some questions under Simplification, candidates might face problem to solve them.
- Below we have given clarification on how to eliminate the brackets while solving these kind of questions.

Order To Eliminate Brackets In Simplification Problems

- There are commonly three types of brackets used in Simplification Aptitude Questions. Candidates must know the sequence to eliminate these brackets in an expression.
- From the table given below, you can check the different types of brackets and their order of elimination.
- To practice these methods, you can prefer the perfect example of Simplification Question that we have provided in this articl

Type of Brackets	Order to Eliminate Brackets
( ) – Common Bracket	First
{ } – Curly Bracket	Second
[ ] – Rectangular Bracket	Third

</> Simplification Question And Answer – Check The Perfect Example!

Example :- What would come in place of the question mark (?) 17 + 24 ÷ 12 × (16 ÷ 4) ^2 - 5 =?

Solution

Step 1 – Eliminate Brackets 17 + 24 ÷ 12 × 4^2 - 5

Step 2 – Exponents 17 + 24 ÷ 12 × 16 - 5

Step 3 – Division and Multiplication (Left to Right) 17 + 2 × 16 - 5 = 17 + 32 - 5

Step 4 – Addition and Subtraction (Left to Right) 49 - 5 = 44

After simplifying the expression by using BODMAS, the correct answer is 44.

- There are some other important factors that should be considered while solving Simplification Problems.
- Here, we also catered the key tips that you need to check at glance.

</> Quick Tips To Attempt Simplification Problems.

- Learn the tables up to 25-30, squares up to 30 and cubes up to 20. This will help you to solve the question in seconds.
- The base of calculation must be strong for simplification and for that you should practice on Multiplication, Division, Subtraction, and Addition on a regular basis.
- Keep practicing questions by test series, it will help you to observe the pattern of the question quickly.
- In Simplification Questions, you can replace 'of' by 'Multiplication' and '/' by 'Division'.
- You can use Rounding the nearest number of available options to simplify the question.
- Use the elimination method to reduce the number of given options. It will help you to save your time.

Simplifying The Complex Expressions Consisting Of Several Operands And Operators Together Making It Somewhat Difficult To Get The Result Out Of It. Hence Steps Have Been Devised To Solve These Kind Of Complex Expressions:

- **First** – Start simplifying the numbers present inside the brackets- from left to right.
- **Second** – Then simplify the numbers which involve power or finding a square root of the number- from left to right.
- **Third** – Once you are done with simplifying the numbers that involve brackets or orders, then move on to division or multiplication. Division and multiplication rank equally, you can start performing the operation from left to right- as they appear in the order.
- **Fourth** - This is the final step in which you perform addition and subtraction. Addition and subtraction are also ranked equally, you can perform any of the operations that appears in the order- from left to right.

MARK AS COMPLETED