**Grade 7 - Order of operations**

**Objectives:**

Students will be able to:

* Know how to deal with operations made of addition, subtraction, multiplication, and division.
* Deal with brackets when they are present in the operation.
* Solve mathematical operations made of different terms.
* Use the calculator to solve numerical operations.

**Introduction:**

Provide a definition for “term” in mathematical operations
Goal Statement: “Today you will learn how to perform calculations on mathematical operations that consist of different terms made of addition, subtraction, multiplication and/or division, and how to proceed in case brackets are present”

**Presentation:**

* Write an operation of two/three terms that consist of addition and subtraction and show that it yields the same answer no matter how you proceed.
* Show the same result with an operation made of multiplication and division.
* Write another operation made of an addition/subtraction followed by a multiplication/division and show that division/multiplication precedes addition/subtraction.
* Write an operation that consists of addition, subtraction, multiplication and division. Introduce brackets to one of the terms, and show that it should be performed first.
* Use a calculator for illustration.

**Practice:**

Students will perform the task sheet.

**Recap:**

* Who can tell me which we should solve first, addition or subtraction? Multiplication or division?
* If multiplication and/or division are present with addition and/or subtraction, which term goes first?
* Can we discard the presence of brackets in an operation?
* How to enter the operation properly on the calculator so as to get the right answer?

**Task Sheet:**

**1- Arrange the following in the order of priority in the mathematical operation:**

Multiplication, Addition, Bracket: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Subtraction, Division, Bracket: \_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2- Solve the following operations:**

$$10+3×7-2=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$

$$17×(5+3)÷2-2=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$

$$12÷3×7+5-2×(4-3×5)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$

$$14-4×\left(2÷3×\left(9+2×2\right)+1\right)-1=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$

**3- Check your answers in number 2 using the Calculator**