

ANURADHA

B.A. (H) Economics-III

LNMU - Part 3

Paper - VIII

Group - A

Dept. of Economics

U.R. College, Raipur

Essential Mathematics for Economics

MODULE I: Mathematical Preliminaries

ARITHMETIC OPERATIONS (PART-II)

The Basic Arithmetic Properties

Commutative Property

The commutative property describes equation in which the order of the numbers involved does not affect the result. Addition and multiplication are commutative operations:

$$2 + 3 = 3 + 2 = 5$$

$$5 \times 2 = 2 \times 5 = 10$$

Subtraction and division, however, are not commutative.

Associative Property

The associative property describes equations in which the grouping of the numbers involved does not affect the result. As with the commutative property, addition and multiplication are associative operations:-

$$(2 + 3) + 6 = 2 + (3 + 6) = 11$$

$$(4 \times 1) \times 2 = 4 \times (1 \times 2) = 8$$

once again, subtraction and division

are not associative.

Distributive property

The distributive property can be used when the sum of two quantities is then multiplied by a third quantity.

$$(2+4) \times 3 = 2 \times 3 + 4 \times 3 = 18$$

Negative Numbers

Arithmetic operations can be performed on negative numbers according to specific rules.

Addition

$$(-3) + (-5) = -8$$

Subtraction

$$5 - 8 = -3$$

that is to say

$$5 + (-8) = -3$$

Multiplication

When multiplying positive and negative numbers, the sign of the product is determined by the following rules:

(a) the product of two positive numbers is positive. The product of one positive number and one negative number is negative.

(b) the product of two negative numbers is positive.

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