BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT - MATHEMATICS

CHAPTER - WHOLE NUMBERS (Part 3)

TOPIC- DISTRIBUTIVE PROPERTY

GUIDELINES-

Dear students

Kindly refer to the following notes/video links from the Chapter- "WHOLE NUMBERS PART-3 " and thereafter do the questions in your Maths notebook.

LINK FOR THE CHAPTER:- http://ncert.nic.in/textbook/textbook.htm?femh1=2-14

INTRODUCTION-

When we look into various operations on numbers closely, we notice several properties of whole numbers. These properties help us to understand the numbers better. Moreover, they make calculations under certain operations very simple.

SUBTOPIC-

- **Distributive property of multiplication over addition or subtraction**

KEY POINTS

- **Distributive property**

(Refer to the link - https://www.youtube.com/watch?v=V-Mvi0MLIvM)

This property is used when we have to multiply a number by the sum.
For any three whole numbers a, b and c
$a \times (b + c) = (a \times b) + (a \times c)$ (addition)
$a \times (b - c) = (a \times b) - (a \times c)$ (subtraction)
In order to verify this property, we take any three whole numbers a, b and c and find the values of the expressions $a \times (b + c)$ and $a \times b + a \times c$ as shown below:

Find $3 \times (4 + 5)$
In this case, you can either add the numbers 4 and 5 and then multiply them by 3
$3 \times (4 + 5) = 3 \times 9 = 27$

OR

you can multiply each addend by 3 and then add the products
$3 \times 4 + 3 \times 5 = 12 + 15 = 27$
Therefore, $3 \times (4 + 5) = 3 \times 4 + 3 \times 5$

Example 1: Find 12 x 35 using distributive property.
Solution : 12 x 35 = 12 x (30 + 5) = 12 x 30 + 12 x 5 = 360 + 60 = 420

Example 2 : Find 5437 x 1001 using distributive property .
Solution : 5437 x 1001 = 5437 x (1000 + 1)
= (5437 x 1000) + (5437 x 1)
= 5437000 + 5437 = 5442437

Example 3 : Find the product 824 x 25 by using suitable property.
Solution : 824 x 25 = (800 + 20 + 4) x 25
= 800 x 25 + 20 x 25 + 4 x 25
= 20000 + 500 + 100 = 20600

Example 4: Find the value : 273 x 55 + 273 x 45
Solution : 273 x 55 + 273 x 45 = 273 x (55 + 45) (distributive property)
= 273 x 100
= 27300

Example 5 : Find the value : 345 x 102 - 345 x 2
Solution : 345 x 102 - 345 x 2 = 345 x (102 - 2)
= 345 x 100
= 34500

SOLVED QUESTIONS ON PROPERTY OF WHOLE NUMBERS-
https://www.youtube.com/watch?v=2SidR6hzxbo

POINT TO REMEMBER-

- Multiplication is distributive over addition / subtraction for whole numbers.

ASSIGNMENT

(EXERCISE - 2.2 Q3 to Q7 and Exercise 2.3 Q4 from N.C.E.R.T and extra questions to be done in notebook)

(Also refer to example 5 on page no.- 39 while attempting word problems)

NOTE : 1) Ex 2.2 , Q3 (d) is **not to be done.**
2) Examples are only for reference, not to be done in notebook.

Q1. Find the value of the following using distributive property :

(i) 2437 × 102

(ii) 92785 × 98 + 92785 × 2

(iii) 493 x 99