Worksheet-8 Subject: - Mathematics Class: - VI Teacher: - Mrs. Poonam Sunil

Name: _____ Class & Sec: _____ Roll No. _____ Date: 28.04.2020

Good Morning students!

Today we are going to discuss Properties of Whole Numbers. These properties help us to understand the numbers better. (Note down neatly) TOPIC: Properties of Whole Numbers

1) Closure property: $7+8=15$, a whole number

$5+5=10$, a whole number

$0+15=15$, a whole number

... + .. = ...

We say that sum of any two whole numbers is a whole number. This property is known as the Closure property for addition of whole numbers.

Similarly

$7\times8=56$, a whole number

$5\times5=25$, a whole number

$0\times15=0$, a whole number

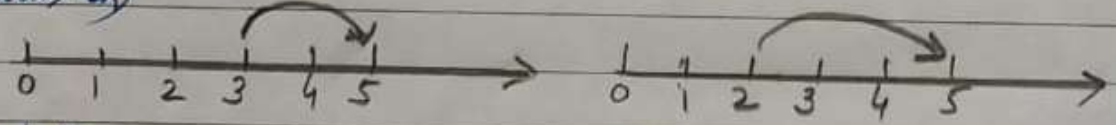
.. x ... = ...

We say that the system of whole numbers is closed under multiplication.

Closure property: Whole numbers are closed under addition and also under multiplication.

2) Commutativity of Addition and Multiplication

(In addition)



In both the cases we reach 5. So 3+2 is same as 2+3

Similarly 5+3 is same as 3+5

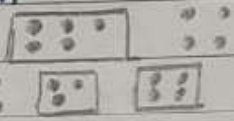
We say that addition is Commutative for whole numbers. This property is known as commutativity for addition.

Date : / /

(In Multiplication)
Multiply numbers 4 and 5 in different ways
$4 \times 5 = 5 \times 4$
We can multiply two whole numbers in any order.
We say multiplication is commutative for whole numbers.
Thus addition and multiplication are commutative for whole numbers.

3) Associativity of addition and multiplication (In Addition)
Observe the following diagram

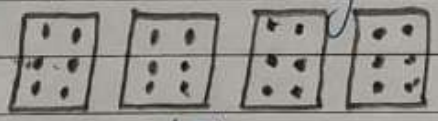
a) $(2+3)+4 = 5+4 = 9$
b) $2+(3+4) = 2+7 = 9$



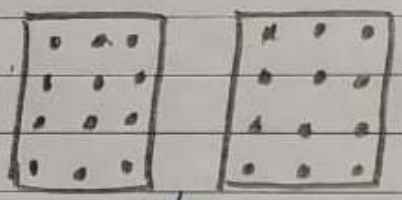
This is associativity of addition for whole numbers.

Example 1: Add the numbers 234, 197 and 103
Solution $234+197+103 = 234+(197+103)$
$= 234+300 = 534$

(In Multiplication)
Count the number of dots in (a)



(a)



(b)

In Fig(a) Total number of dots $= (2 \times 3) \times 4 = 6 \times 4 = 24$

In Fig(b) each box has 3×4 dots, so in all there are
$2 \times (3 \times 4) = 2 \times 12 = 24$ dots.
This is associative property for multiplication of whole numbers

Example 2: Find $14+17+6$ in two ways.
Sol: $(14+17)+6 = 31+6 = 37$
$14+17+6 = 14+6+17 = (14+6)+17 = 20+17 = 37$

Next time we will discuss distributive property of Multiplication over addition. {Good Bye Students ! Stay Safe !}