

Worksheet: - 9 Subject: - Mathematics Class:-VI Teacher:-Mrs. Poonam Sunil
 Name:-_____ Class & Sec.:-_____ Roll No.:-_____ Date:-17/4/2021

Page 31)

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

a) **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.

Similar

$7 \times 8 = 56$, a whole number

$5 \times 5 = 25$, a whole number

$0 \times 15 = 0$ a whole number

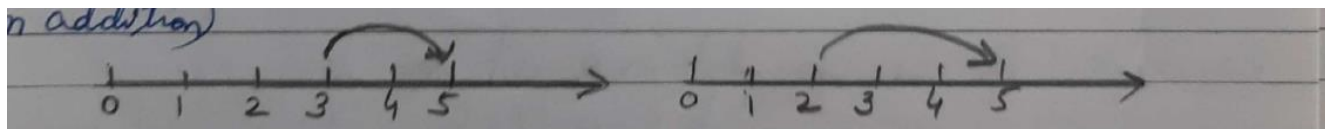
.....x.....=.....

We say that the system of whole number 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 $5+3$ same as $3+5$

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

In Multiplication Multiply numbers 4 and 5 in different ways


$4 \times 5 = 5 \times 4$ We can multiply the whole number in any order.

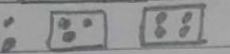
We say multiplication is commutative for whole numbers.

This addition and multiplication are commutative for whole numbers

3) Associativity of Addition and Multiplication (In Addition)

Observe the following diagram

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

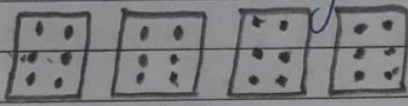
b) $2+(3+4) = 2+7 = 9$ 

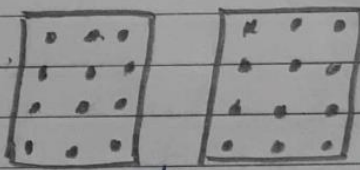
This is associativity of addition for whole numbers.

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) 



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]