

Chapter 1 operations in Arithmetic.

① Fundamental Arithmetic operations & its Notations.

- a) addition (+) plus $\rightarrow 5+2=7$
- b) subtraction (-) minus $\rightarrow 5-2=3$
- c) multiplication (x) Times, product $\rightarrow 2 \times 3 = 6$
 $\rightarrow (2)(3) = 6$
- d) division $\rightarrow (\div, /)$
 $\rightarrow \frac{6}{2} = 3 ; 6 \div 2 = 3$

①.2 Whole numbers & directed numbers.

① Natural number (counting) $\rightarrow 1, 2, 3, 4, 5, \dots$

② Whole numbers $\rightarrow 0, 1, 2, 3, 4, \dots$

③ integers $\rightarrow \dots, -3, -2, -1, 0, 1, 2, 3, 4, \dots$
(Directed numbers)

The diagram shows the sequence of integers $\dots, -3, -2, -1, 0, 1, 2, 3, 4, \dots$ with brackets and arrows indicating their classification:

- A bracket under $-3, -2, -1$ points to the text "Negative numbers" and "-ve".
- An arrow points from 0 to the text "zero".
- A bracket under $1, 2, 3, 4$ points to the text "positive (+) numbers".

9000



700



5555



ones
tens
hundred
Thousand

162



1	2	3	,	4	5	6	,	7	8	9	,	0	1	2
hundred billions	Ten billions	billions		hundred millions	ten millions	millions		hundred thousand	Ten thousand	1 thousands		hundreds	Tens	ones

one hundred billions, two ten billions, three billion, four hundred millions, five ten millions, six millions, seven hundred thousands, eight ten thousands, nine thousands, zero hundreds, one tens, two ones.

1.3 - Basic rules on operations

A - Addition

positive + positive = positive (add) $\rightarrow 20 + 30 = 50$

* Negative + Negative = negative (add) $\rightarrow -20 + -30 = -20 - 30 = -50$

positive + Negative = sign of large number

Negative + positive $\Rightarrow$ (subtract) * $15 + (-8) = 15 - 8 = 7$

* $-15 + 8 = 8 - 15 = -7$

* $-12 - 1 - 9 = -22$

* Notes

* 3 or more numbers $\rightarrow$ add or subtract from left to right

* After Addition $\rightarrow$ result is called (The sum or Total)

* After subtraction $\rightarrow$ result is called (the difference)

* After multiplication $\rightarrow$ result is called (the product)

* After division $\rightarrow$ result is called (the quotient).