0

0 is neither positive nor negative

neutral no

Intgers /पूर्णांक

negative integers

non-negative integers

$\infty \ldots -3, -2, -1, 0, 1, 2, 3, 4, 5 \cdots \infty$

positive integers

$0, 1, 2, 3, 4, 5 \cdots \infty$

Non-negative integers
(whole numbers)
पूर्ण संख्याये = 0 & Positive integer

$1, 2, 3, 4, 5 \cdots \infty$

Positive integers
(Natural numbers)
प्राकृतिक संख्याये

Natural numbers

1, 2, 3, 4, 5 ……∞

1

Prime numbers
अभाज्य संख्याये (V.V.Imp)

जिनके exact 2 factors होते है। (1 & itself)

only 3 consecutive odd prime no's

Ex : 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31 ……

only even prime no

Composite numbers
भाज्य संख्याये

जिनके कम से कम 3 factors होते है।

E E E odd

Ex : 4, 6, 8, 9, 10, 12 …

Smallest Composite no

Smallest odd Composite no

each prime no's (6n ± 1) form होता है। (> 3) ✓

prime no's → $(6n \pm 1)$ form

any no $(6n \pm 1)$ form → जरूरी नहीं कि वो prime no हो।

$25 = 6 \times 4 + 1$

↓

prime नहीं है।

1 is neither prime nor composite.

1 is an universal factor.

Prime no.

(1-100) के बीच → 25

(1-50) के बीच → 15

(50-100) के बीच → 10

(1-200) के बीच → 46

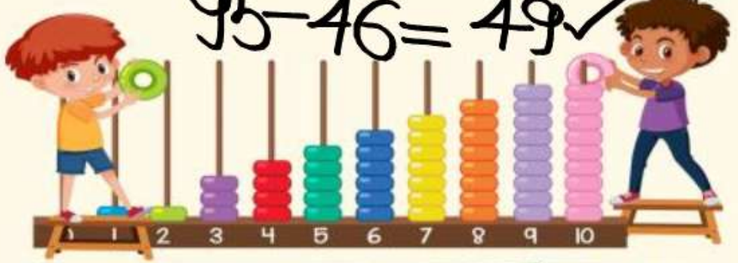
(1-500) के बीच → 95

(1-1000) के बीच → 168

(1-100) के बीच prime no ⇒

2, 3, 5, 7, 11, 13 17,
19, 23, 29, 31, 37 41,
43, 47, 53, 59, 61
67, 71, 73, 79, 83,
89, 97

200 से 500 के बीच prime no =
95-46 = 49



MATH

2 ✓

11 → smallest 2 digit prime no

97 ← largest 2 digit "

101 ←

997 →

1009 ←

9973

10007

99991

prime nos

Twin Prime no's:

Two prime no's whose difference is 2.

दो अभाज्य संख्याएँ जिनका अंतर 2 है।

Examples: (3,5), (11,13), (29,31), (59,61), (17,19)

Relatively Prime nos

Co-prime no's (सह-अभाज्य संख्याये):

Two numbers (integers) whose HCF is 1.

(दो संख्याएँ (पूर्णांक) जिनका HCF 1 है।)

(15,23) ✓
(9,14) ✓
(25,48) ✓
(7,13) ✓
(11,16) ✓
(9,26) ✓
(16,28) ✗
(35,77) ✗

Integers (पूर्णांक)

Even numbers
सम संख्याये

वो integers जो 2 से completely divisible होते है।

Ex : −6, −4, −2, 0, 2, 4, 6, 8, ⋯ ∞

2n form

Odd numbers
विषम संख्याये

वो integers जो 2 से divisible नहीं है।

Ex : −1, −5, 1, 3, 5, 7, 9, 11, 13, ⋯ ∞

(2n±1) form

$N \neq 0$

$$\frac{0}{N} = 0$$

0 is an even no

(संख्या) N ≠ 0

any no × 0 = 0

N × 0 = 0

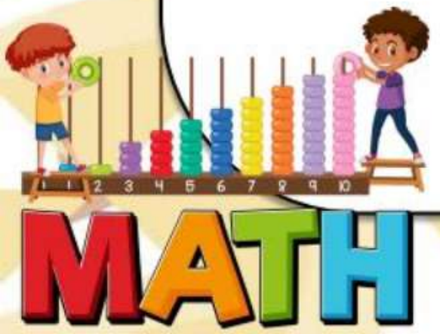
0/N=0

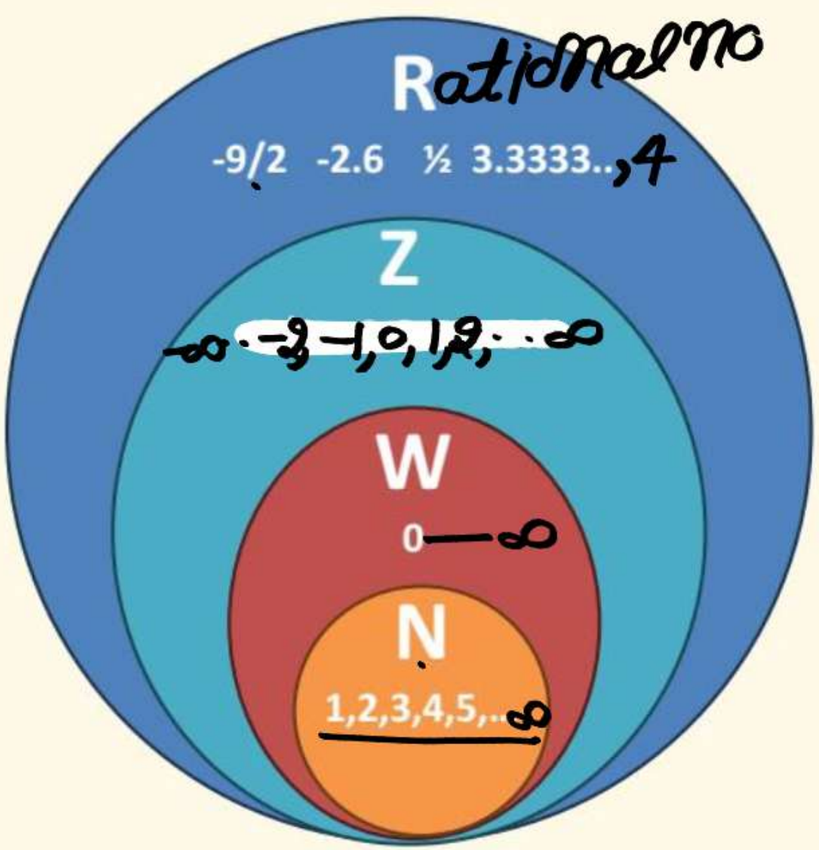
N/0 = undefine/not possible

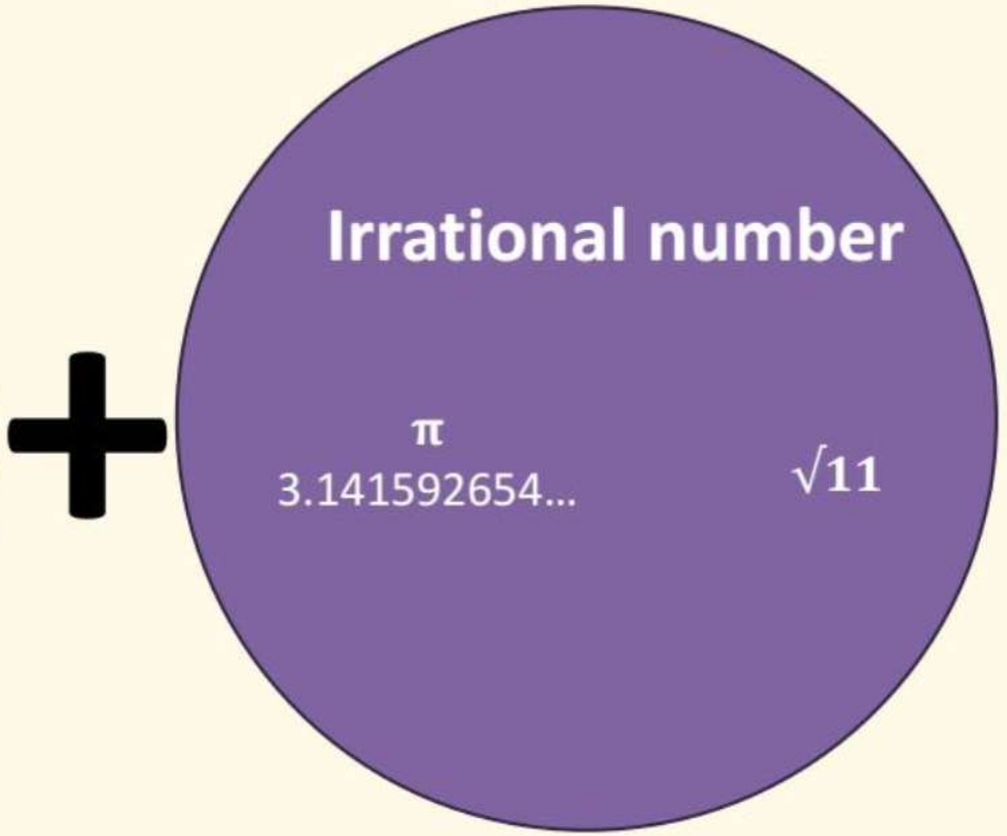
$$\frac{0}{0} = undefine$$

$N = OX?$

- Odd×Odd=Odd
- Odd±Odd=Even
- Even×Even=Even
- Even±Even=Even
- Odd×Even=Even
- Odd±Even=Odd







= Real no.

$\frac{p}{q}$ = form

R	Rational Numbers
Z	Integers
W	Whole Numbers
N	Natural Numbers