

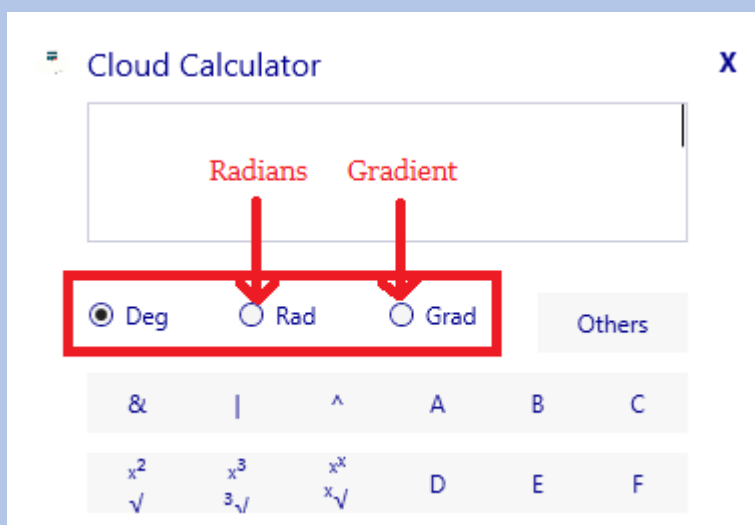
# CLOUD CALCULATOR

## About Cloud Calculator:

A Calculator that almost covers scientific operations. Input is similar to real scientific calculator instead each individual operations.

## How to Use:

All inputs are default Degrees, if want to change just switch radio button to Radian or Gradient.



## Base Calculations:

### 1) AND (&):

It returns byte value like '1' or '0' by and logical calculation.

Input like 1 & 1 or 1 & 0 or 0 & 1 or 0 & 0. Not more than 1 or 0.

### 2) Or (|):

It returns byte value like '1' or '0' by and logical calculation.

Input like 1 | 1 or 1 | 0 or 0 | 1 or 0 | 0. Not more than 1 or 0.

### 3) Xor (^):

It returns byte value like '1' or '0' by and logical calculation.

Input like 1 & 1 or 1 & 0 or 0 & 1 or 0 & 0. Not more than 1 or 0.

## **Algebraic Calculation:**

### **a) Square or Square Root:**

Square Root can be done by  $\sqrt{4}$  or  $\sqrt{4,2}$ .

Square can be done by  $2^2$  or  $\text{Pow}(2,2)$ .

### **b) Cube or Cubic Root:**

It can be done by  $\sqrt[3]{4}$  or  $\sqrt[3]{4,3}$ .

Square can be done by  $2^3$  or  $\text{Pow}(2,3)$ .

### **c) Higher Power or Root:**

It can be done by  $\sqrt[4]{3}$ .

Square can be done by  $\text{Pow}(2,3)$ .

### **d) Logarithm or anti-log:**

Log:  $\text{Log}(100,10) \rightarrow 100 = \text{value}; 10 = \text{base (base} > 1)$ .

Base may be Exponential for natural log.

Anti-Log:  $\text{Pow}(10,1) \rightarrow 1 = \text{value}; 10 = \text{base of Log}$ .

### **e) Natural Logarithms ( Ln ) or anti-log:**

Log:  $\text{Log}(100, \text{Pow}(e,1))$

Where  $100 = \text{value}$ ;

$\text{Pow}(e,1) = \text{base}$ .

(Or)  $\text{Ln}(100)$ .

Anti-Log:  $\text{Pow}(e,1) \rightarrow 1 = \text{value}$ .

### **f) Percentage ( % ):**

By Press % in Calculator or KeyBoard results ‘%’ Result.

### **g) L.C.M or H.C.F:**

L.C.M with Single Value  $\rightarrow$  returns List of all Values behind entered Value.

L.C.M with Multi Values  $\rightarrow$  returns L.C.M of inputed numbers.

H.C.F  $\rightarrow$  returns H.C.F of inputed values.

**h) Absolute Value:**

Returns entered absolute value like (-1) -> 1.

**i) Modulus:**

Returns Modulus of two numbers.

**j) Prime or List of prime:**

Prime: returns true or false for given value.

List of prime: returns list up to entered value.

Input should be either Prime or List of Prime not more than that.

**k) Inverse:**

Returns Inverse value of given value.

**l) Angle():**

First enter value to screen and then press Angle

Input should be numbers only like 3, 4, 5 ....

**Trigonometric Calculation:**

**a) Sin, Cos, Tan, Sinh, Cosh, Tanh:**

Returns Sin, Cos, Tan, Sinh, Cosh, Tanh value for given value

**b) Inverse Trigonometric Functions:**

Returns ASin, ACos, ATan, ASinh, ACosh, ATanh value for given value

**c) Pi:**

Based on selected Mode ( Degree, Radians, Gradients ) returns Pi value

**Permutations and Combination:**

**a) Permutation or Combination:**

Returns Permutation or Combination of two numbers.

Input Like 5P4 or 5Co4 left side of 'P' or 'Co' should be higher than or equal to right side.

**b) Factorial:**

Returns factorial of inputted value.

Input Like 5!

**Complex Numbers:**

**a) Polar Form (  $r \angle \emptyset$  ):**

Convert from rectangular form (a+bi) to polar form

Input like Pol( 1,2 ) not more than this

1 -> r

2 ->  $\emptyset$

**b) Rectangular Form (a+bi):**

Convert from polar form (  $r \angle \emptyset$  ) to rectangular form

Input like Rect( 1,2 ) not more than this

1 -> r

2 ->  $\emptyset$

**c)  $a + ib$  or  $r \angle \emptyset$  :**

Convert result from either polar to rectangular or rectangular to polar form

**d) i or  $\angle$ :**

For rectangular form input like a + bi.

For polar form input like  $r \angle \emptyset$  .

**Matrices:**

**a) Add:**

Add matrix by either Matrix A + Matrix B + .....

Or Add( Matrix A, Matrix B, Matrix C,..... )

Or Simply Add( 1, 2, ..... ) simple numbers for algebraic addition.

**b) Sub:**

Sub matrix by either Matrix A - Matrix B - .....

Or Sub( Matrix A, Matrix B, Matrix C,..... )

Or Simply Sub( 1, 2, ..... ) simple numbers for algebraic addition.

**c) Mul:**

Mul matrix by either Matrix A \* Matrix B \* .....

Or Mul( Matrix A, Matrix B, Matrix C,..... )

Or Simply Mul( 1, 2, ..... ) simple numbers for algebraic addition.

**Statistics:**

**a) Standard deviation, Variance, Mean, Mean Square, Sum of numbers or Sum of square of numbers:**

Input just A or B or C or D or E or F only and press SD or variances or ..... keys.

**Instructions:**

**Invalid Operations:**

Single turn answer which are Pol( ) , Rect( ) , L.C.M( ) , Matrix, Prime( ) , ListofPrime( ) should input only those keywords only.

Base value like AND, OR,XOR should be either 1,0 or & | ^.

If input other than Mat or Statistics contains A, B, C, D, E, F it return zero.


Remember for using combination use nCor instead nCr.

Key press answers which are '=', Angle(), SD, Variance,  $\bar{x}$ ,  $\bar{x}^2$ ,  $\Sigma x$ ,  $\Sigma x^2$ , %, a+ib,  $r \angle \emptyset$  those returns direct answer only.

For providing input to statistics or matrices press 'List of vaariable' button in Calculator.

For other calculation like AP, GP, HP, Equation Solving, Constants and Conversions use Others button.

Prime	List of Prime	Inv	SD	Variance	Angle()
M 7	G 8	T 9	( )		Clr
$\mu$ 4	m 5	k 6	.	*	/
f 1	p 2	n 3	+	-	=
$\bar{x}$	0	$\bar{x}^2$	$\Sigma x$	$\Sigma x^2$	List of variable



Cloud Calculator

Matrix ▾

Matrix

Statistics

Number of List Items:
 

m  \* n

Next

Close

### Constants:

Select constant term in dropdown and provide input to get answer with its unit.

### A.P:

Let  $1 + 2 + 3 + \dots + 10$  (Sum) or  $1 - 2 + 3 - 4 + 5 - 6 + \dots$  (sum and difference)

Here first number is 1, difference is 1 (2-1 or 3-2 or 4-3 or .....)

last number is 10.

Input using above terms.

By selecting Sum or Sum and Difference in dropdown it results the output.

### G.P:

Let  $1 + 2 + 4 + \dots + 10$  (Sum) or  $1 - 2 + 4 - 8 + 16 - 32 + \dots$  (sum and difference)

Here first number is 1, ratio is 2 (2/1 or 4/2 or 8/4 or .....)

last number is 10.

Input using above terms.

By selecting Sum or Sum and Difference in dropdown it results the output.

### H.P:

Let  $1 + (1/2) + (1/3) + \dots + (1/10)$  (Sum) or  $1 - (1/2) + (1/3) - (1/4) + (1/5) - (1/6) + \dots$  (sum and difference)

Here first number is 1, difference is 1(2-1 or 3-2 or 4-3 or .....)

i.e  $(1/(1/2) - 1/(1/1) \text{ or } 1/(1/3) - 1/(1/2) \dots)$

last number is 10.

Input using above terms.

By selecting Sum or Sum and Difference in dropdown it results the output.

Two Equation or Three Equations:

Two Equ  $\Rightarrow (ax+by=c \text{ and } dx+ey=f)$

Three Equ  $\Rightarrow (a_1x+a_2y+a_3z=a, b_1x+b_2y+b_3z=b \text{ and } c_1x+c_2y+c_3z=c)$

Output returns like (a,b) (c,d) (e,f)

i.e (a,b)  $\rightarrow a=\text{real number and } b=\text{imaginary number}$

input may be complex number which are proving I by keyboard and  $\angle$  in button provided aside 'Equations:' Label.

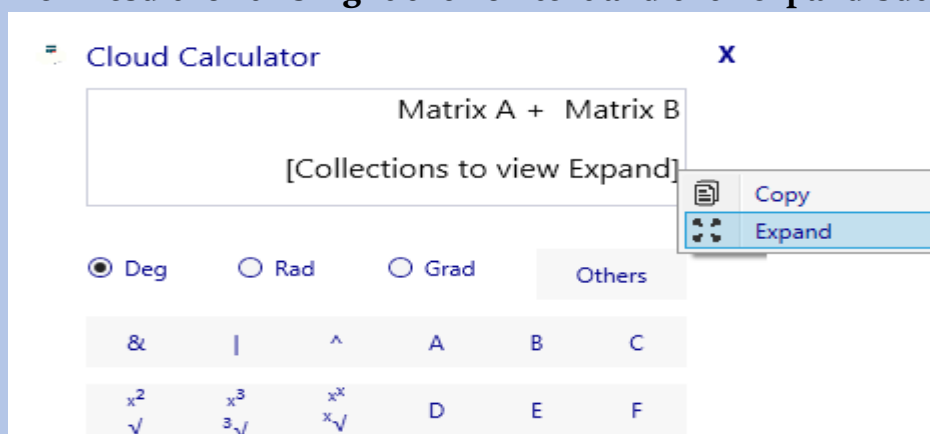
Conversions:

Based on selected dropdown it returns respective output related to input

Results:

Output may be Complex number or decimal for normal operations

If input may be matrix it returns "[Collections to view Expand]" to view result for this right click on text and click expand button



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