

1.  $A=\{3,4,5,6,7\}$   
 $B=\{8,9,10,11,12\}$   
 $C=\{1,0.37,0.19,0.8,0.7\}$

**Math Function:**

a)  $D=A+B$

$D1=A1+B1,$

$3+8=11$

$D2=A2+B2$

$= 4+9=13$

b)  $E1=A1-C1$

$3-1=2$

c)  $F=A*B/C$

$F1=A1*B1/C1$

$=3*8/1=24$

d)  $G=A^4$

$G1=A1^4$

$(3)^4=81$

e) Find  $H=B!$

$B=FACT(8)=40320$

f)  $I=(A+Bi)$  find  $I^*$

$I=complex(3,8)$  then  $I^*=conjugate(cell)$

g) If  $A(Kelvin)$  convert as  $K=A(Celsius)$

$A=3(kel)$  ; THEN  $A=convert(A1,"cel")=-270.15(cel)$

h)  $X=[1 \ 2 \ 3 ; 6 \ 5 \ 4 ; 7 \ 10 \ 9]$   $Y=[17 \ 11 \ 19 ; 22 \ 21 \ 20 ; 11 \ 12 \ 13]$

Find  $Det\{X\}=mdeterm(cellrange)$ ,  $X^{-1}=inv(cell\ range)$ ,  $X+Y$ ,  $X.Y=mmult(X,Y)$

i) Find  $X*Y$  and compare with  $X.Y$

X		
1	2	3
6	5	4
7	10	9

Y		
17	11	19
22	21	20
11	12	13

$X^{-1}$		
0.178571	0.428571	-0.25
-0.92857	-0.42857	0.5
0.892857	0.142857	-0.25

$Y^T$		
17	22	11
11	21	12
19	20	13

X+Y		
18	13	22
28	26	24
18	22	22

DET(X)	DET(Y)
28	462

X*Y		
17	22	57
132	105	80
77	120	117

X.Y		
94	89	98
256	219	266
438	395	450

## 2. Trigonometric Function:[assume both values in either Radians or Degree]

i) L=cos(A), M=exp(B),

ii) O=sin<sup>-1</sup>(C)

iii) P=ln(B)

A	B	COS(A)	DEGREES(COS(A))	EXP(B)	DEGREES(EXP(B))	ASIN(C)	DEGREES(ASIN(C))	ln(B)	ln(B)
		Radians	Degree	Radians	Degree	Radians	Degree	Radians	Degree
3	8	-0.98999	-56.7224	2980.958	1150.816	1.570796	90	1.098612	62.94585
4	9	-0.65364	-37.451	8103.084	3128.244	0.379009	21.71562	1.386294	79.42882
5	10	0.283662	16.25265	22026.47	8503.448	0.191162	10.95278	1.609438	92.214
6	11	0.96017	55.01371	59874.14	23114.77	0.927295	53.1301	1.791759	102.6603
7	12	0.753902	43.19542	162754.8	62832.45	0.775397	44.427	1.94591	111.4924

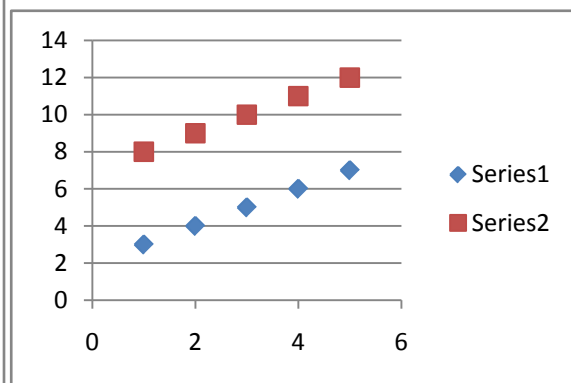
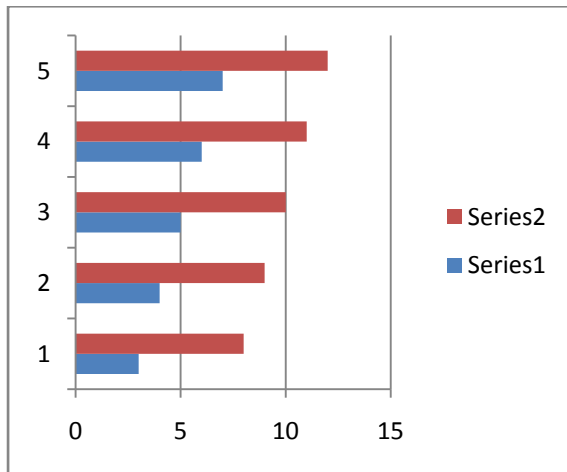
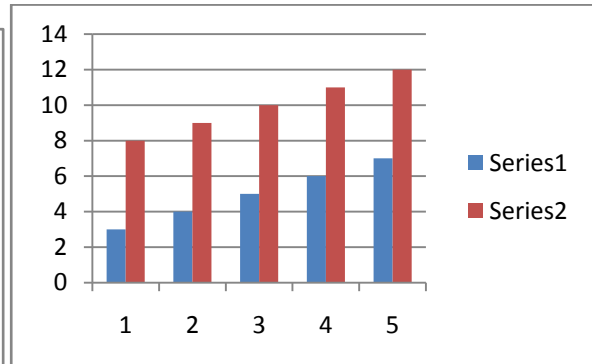
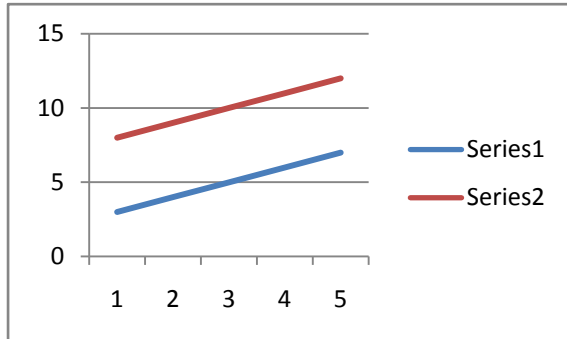
## 3. Statistical Function:

Find Statistical parameters for B (Variance, Median, Standard Deviation)

<b>VAR(B)</b> 2.5	VAR uses the following formula: $\frac{\sum (x - \bar{x})^2}{(n-1)}$
<b>MEDIAN(B)</b> 10	
<b>STDEV(B)</b> 1.581139	STDEV uses the following formula: $\sqrt{\frac{\sum (x - \bar{x})^2}{(n-1)}}$

#### 4. Plot Graph

Line, Bar, Column, Scatter : set (A,B)



Weight and mass	From_unit or to_unit
Gram	"g"
Slug	"sg"
Pound mass (avoirdupois)	"lbm"
U (atomic mass unit)	"u"
Ounce mass (avoirdupois)	"ozm"

Distance	From_unit or to_unit
Meter	"m"
Statute mile	"mi"
Nautical mile	"Nmi"
Inch	"in"
Foot	"ft"
Yard	"yd"
Angstrom	"ang"
Pica (1/72 in.)	"Pica"

Time	From_unit or to_unit
Year	"yr"
Day	"day"
Hour	"hr"
Minute	"mn"
Second	"sec"

Pressure	From_unit or to_unit
Pascal	"Pa" (or "p")
Atmosphere	"atm" (or "at")
mm of Mercury	"mmHg"

Force	From_unit or to_unit
Newton	"N"
Dyne	"dyn" (or "dy")
Pound force	"lbf"

Energy	From_unit or to_unit
Joule	"J"
Erg	"e"
Thermodynamic calorie	"c"
IT calorie	"cal"
Electron volt	"eV" (or "ev")
Horsepower-hour	"HPh" (or "hh")
Watt-hour	"Wh" (or "wh")
Foot-pound	"flb"
BTU	"BTU" (or "btu")

Power	From_unit or to_unit
Horsepower	"HP" (or "h")
Watt	"W" (or "w")

Magnetism	From_unit or to_unit
Tesla	"T"
Gauss	"ga"

Temperature	From_unit or to_unit
Degree Celsius	"C" (or "cel")
Degree Fahrenheit	"F" (or "fah")
Kelvin	"K" (or "kel")

Liquid measure	From_unit or to_unit
Teaspoon	"tsp"
Tablespoon	"tbs"
Fluid ounce	"oz"
Cup	"cup"
U.S. pint	"pt" (or "us_pt")
U.K. pint	"uk_pt"
Quart	"qt"

Gallon	"gal"
Liter	"l" (or "lt")

The following abbreviated unit prefixes can be prepended to any metric from\_unit or to\_unit.

Prefix	Multiplier	Abbreviation
exa	1E+18	"E"
peta	1E+15	"P"
tera	1E+12	"T"
giga	1E+09	"G"
mega	1E+06	"M"
kilo	1E+03	"k"
hecto	1E+02	"h"
deka	1E+01	"e"
deci	1E-01	"d"
centi	1E-02	"c"
milli	1E-03	"m"
micro	1E-06	"u"
nano	1E-09	"n"
pico	1E-12	"p"
femto	1E-15	"f"
atto	1E-18	"a"

## Remarks

- ⚠ If the input data types are incorrect, CONVERT returns the #VALUE! error value.
- ⚠ If the unit does not exist, CONVERT returns the #N/A error value.
- ⚠ If the unit does not support an abbreviated unit prefix, CONVERT returns the #N/A error value.
- ⚠ If the units are in different groups, CONVERT returns the #N/A error value.
- ⚠ Unit names and prefixes are case-sensitive.