MTH302 - BUSINESS MATHEMATICS & STATISTICS

If the price of an English novel decreases from Rs 255.50 to Rs 230.25. What is the percentage decrease?

- 8.9 %
- 9.9 %
- 10.9%
- 11.9 %

If the basic salary is Rs 6500 and the social charges are Rs 1820, what percentage of basic salary are the social charges?

- 27 %
- 28 %
- 29 %
- 30 %

You invested $500 and received $650 after three years. What had been the interest rate?

- 20%
- 30%
- 10%
- 25%

After the merchant buys merchandise, it is sold at a higher price called the _____

- Sale price
- Revenue discount
- Selling price
- Cost price

The price at which the product should be sold to the consumer is called the _____ price.

- Retailer's
- List
- Manufacture's
- Raw material

Total Provident Fund added to the employee's fund is ---------- of the basic salary.

- 1 / 11 th
- 2 / 11 th
- 9.09 %
- 9.99%

Which statement is true?

- Social charges comprise the leaves, group insurance and medical.
- Social charges comprise House rent and conveyance allowance.
- Social charges comprise gratuity and provident funds.
- Social charges comprise employee's children's education, club membership only.

What will be the base of 25% rate and percentage is 65?

- 216
- 250
- 260
- None of these

Which of the following percent is Conveyance Allowance of the basic salary?

- 2.5%
- 45%
- 5%
- None of these

If 25 is decreased to 12,then percentage decrease will be

- 50
- 51
- 52
- None of these

According to the local laws, the allowances are considered tax free if they are up to

- half of the basic salary
- one fourth of the basic salary
- one third of the basic salary
- 55% of the basic salary

Amount of discount is obtained as

- Percentage of Discount x List Price
- Percentage of Discount / List Price
- Percentage of Discount - List Price
- None of these

The formula for Net Price =

- L(d-1)
- L/(1 - d)
- L(1 - d)
- None of these

Interest calculated upon the principal amount added to the interest on it is called ……

- Simple interest
- Compound interest
- Annual interest per year
- Semi annual interest

This example returns the depreciation for an asset that costs Rs. 10,000, with a salvage value of $6,000. The useful life of the asset is 4 years. The depreciation is being calculated for the first year, and there are 12 months in the first year.

- =DB (10000, 6000, 4, 1, 12)
- =DB (10000, 6000, 4, 12, 1)
- =DB (6000, 10000, 4, 12, 1)
- =DB (10000, 6000, 4, 1, 1)

Transformation of $\frac{3}{16}$ as a percent is

- 5.33%
- 18.75%
- 0.001875
- 0.1875

If A is the matrix of dimension 2×3 and I is the identity matrix of dimension 3×3. Then which of the following is true

- $AI = I$
- $AI = A$
- $A + I = A$
- $A + I = I$

Interest paid (earned) on both the original principal borrowed (lent) and previous interest earned is often referred to as

- future value
- compound interest
- simple interest
- present value

If A= [a b c] is a matrix then in order to find AB, the number of columns B must have are

- 3
- 1
- 2
- any non zero number

$3x^{2+}$ 5x – 7 is ---------- expression.

- Monomial
- Binomial
- Trinomial
- Linear

If the principal P is 900 rupees, time period is 6 years and rate is 12% then the simple interest will be

- 648
- 658
- 668
- 678

One kg apples cost Rs. 12. They are sold at the markup of $12\frac{1}{2}$ %. The selling price is ----------

- 13.50
- 12.50
- 11.50
- 14.50

Find x if 2x + 6 = 10.

- 8
- 2
- -2
- -8

The world is getting warmer — and U.S. scientists now know precisely how much warmer. They calculated the average percentage rise of 0.015% at the end of the century. If the current average temperature of the planet is X what would be the average temperature of the earth at the end of 4008 AD?

- X(1+0.015)^2
- X(1+0.015%)^2
- 2(1+)^0.015
- X(1+X)0.015

Markup is an amount added to a ……while calculating a selling price

- Cost price
- Bid price
- Offer price
- None of these

If matrix A has an order 3*3 and matrix B has an order 3*2, then the order of a matrix A*B is ……

- 3*3
- 2*3
- 3*2
- 2*2

If x: y = y: 1, then

- X = y
- X = y^2
- X = y / x
- X = -y

In Excel there different types of operators are

- 3
- 4
- 5
- 12

This example returns the present value of an investment that pays Rs. 250 at the end of every month for 2 years. The money paid out will earn 7.5% annually.

- =PV (7.5%/12, 2*12, 250, 1)
- =PV (7.5%/12, 2*12, 250, 0)
- =PV (7.5%/12, 2, 250, 0)
- =PV (7.5%, 2*12, 250, 1)

To add numbers based on criteria stored in a separate range we use

- IF and SUM functions.
- DSUM function.
- AVERAGE function.

- all functions in above given choices.

12.5% of a circular plot as a fraction is expressed as

- $\frac{5}{4}$
- $\frac{125}{1}$
- $\frac{8}{1}$
- $\frac{1}{8}$
-

Given a matrix A such that

$$A = \begin{bmatrix} -3 & -2 \\ 4 & 3 \end{bmatrix}$$

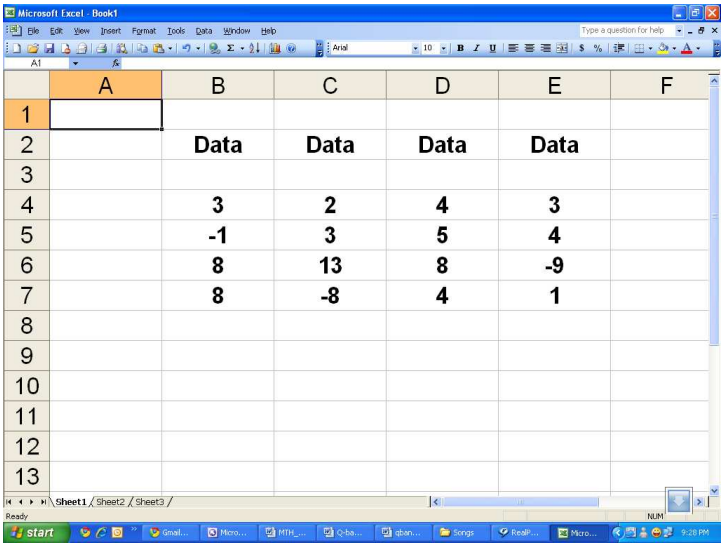
Then A^{-1} will be

- $\begin{bmatrix} -3 & -2 \\ 4 & -3 \end{bmatrix}$
- $\begin{bmatrix} 3 & 2 \\ -4 & -3 \end{bmatrix}$
- $\begin{bmatrix} 3 & 2 \\ 4 & -3 \end{bmatrix}$
- $\begin{bmatrix} 3 & -2 \\ 4 & 3 \end{bmatrix}$
-

In 2 years you are to receive $10,000. If the interest rate were to suddenly decrease, the present value of that future amount to you would

- Fall
- Rise
- remain unchanged
- The correct answer cannot be determined without more information

Which is the correct syntax for the determinant of a matrix given by the following array



	A	B	C	D	E	F
1						
2		Data	Data	Data	Data	
3						
4		3	2	4	3	
5		-1	3	5	4	
6		8	13	8	-9	
7		8	-8	4	1	
8						
9						
10						
11						
12						
13						

- =DETERM(B4:E7)
- =MDTERM(B4:E7)
- =MDETERM(B4:E7)
- =MDETERM(B4;E7)

Which function calculates depreciation at the same amount each year over an asset's useful life?

- DB
- SLN
- DDB
- All of above

The Basic salary of an employee is Rs 7,000. What is the contribution of the company on account of gratuity to the Gratuity Trust Fund?

- Rs 636.36
- Rs 6363.6
- Rs 63.636
- Rs 6363

If the price of a shirt is Rs 250 and discount on its price is Rs 30, what is the percentage of discount?

- 10 %
- 11%
- 12%
- 15%

The radius of a circle is increased by 2 %. What's the percentage increase in its circumference *C*?
Note $C = 2\pi r$

- 20%
- 2%
- 0.2%
- 25%

0^1=?

- 0
- 1
- undefined
- infinity

The short cut method of showing a number is multiplied by itself is called

- Superscript
- Subscript
- Exponent
- None of these

A Matrix is a ……. of numbers

- Rectangular array
- Triangular array
- Linear array
- None of these

Net price =

- List price +trade discount
- List price - trade discount
- List price /trade discount
- List price * trade discount

If for the next 8 years you save Rs. 20,000 per six months then how much will you have accumulated at the end of 8 years. Payments are to be made at the end of each annuity period, assume an interest of 8% compounded quarterly? Which function can give you correct answer of above question?

- FV(0.08, 8, 20000, 0,0)
- FV(0.08, 8, 20000, 0, 1)
- FV(0.08/2, 8*4, 20000, 0, 0)
- PV(0.08/2, 8*4, 20000, 0, 0)

Umair's greeting card business sells a card for Rs. 30. To make his desired profit, Umair needs a 35% Markup on Selling Price. What does a greeting card Cost Tanveer?

- Rs 9.5
- Rs 19.5
- Rs 29.5
- Rs 22.5

you are given values as : Cell A50: 25 , Cell B50: 15
The formula for multiplication is:

- =A50*B50
- =A50 +B50
- =A50(B50)
- =A5*B5

Given : List Price =5500Rs , Discount = 850Rs, then Net Cost Price will be

- 6350 Rs
- 5508 Rs
- 5585 Rs
- 4650 Rs

If x% of a number is y, then the number is

- $y \times \frac{x}{100}$

- $x \times \frac{100}{y}$
- $y \times \frac{100}{x}$
- $xy \times \frac{100}{100}$
-

$$\begin{pmatrix} 2 & 1 \\ 3 & -4 \end{pmatrix}\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$$

Product: =

- $\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$
- $\begin{pmatrix} 3 & 1 \\ 3 & -3 \end{pmatrix}$
- $\begin{pmatrix} 2 & 1 \\ 3 & -4 \end{pmatrix}$
- $\begin{pmatrix} 1 & 1 \\ 3 & -5 \end{pmatrix}$
-

Solution of the linear equations:
$x + y = 2$
$3x + 3y = 5$
is

- $(x, y) = (0, 0)$
- $(x, y) = (0, -3)$
- $(x, y) = (-3, 0)$
-
- Can't be found

After marketing analysis, the Contribution Margin in rupees provided that variable cost = Rs.400 & expected sale price is Rs.800 is

- 2
- 1/2
- -400
- 400

Store A marked down a $ 50 perfume to $ 40 with markdown of $10
The % Markdown is

- 10%

- 20%
- 30%
- 40%

Which of the following is linear equation?

- 2x-3y=-6
- x+x+x
- $520x^2y^2$
- y^2 -3=0

In which Trust Fund, the company does not deduct, but only contribute 1/11th of Basic Salary of the employee per month?

- ► Provident Fund
- ► Gratuity Fund
- ► Charity Fund
- ► None of the above

The price at which a business purchases merchandise is called the

- ► List
- ► Cost
- ► Investment
- ► Exchange rate

Sum of annuity is an accumulated amount of:

- ► Original payments and discount
- ► Original payments and interest
- ► Interest and the payment yet not paid
- ► Compound interest

The speed of a moving car is 30 m/s. If the driver accelerates with a rate 5% per 10 seconds what will be its speed after 2 minutes?

- ► 42m/s
- ► 48m/s
- ► 56m/s
- ► 39m/s

0.20% = ----------

- ► 0.2
- ► 0.02
- ► 0.002
- ► 0.0002

Which of the following is the system of linear equations?

- ► $4x + 6y = 9$
- ► $3x^2 + 5y^2 = 7$, $x + y = 8$
- ► $5x + 7y = 12$, $2x + 8y = 10$
- ► $2x^2 - 5x + 7 = 0$

To add two cells (A1 and A2) together you use the following formula

- ► =A1 + A2
- ► =Add(A1+A2)
- ► =together(A1:A2)
- ► A1 plus A2

If the cost & selling price of a pen are Rs.12 & Rs.15 respectively, profit percentage is:

- ► 33.33%
- ► 25%
- ► 20%
- ► 10%

In the distribution chain

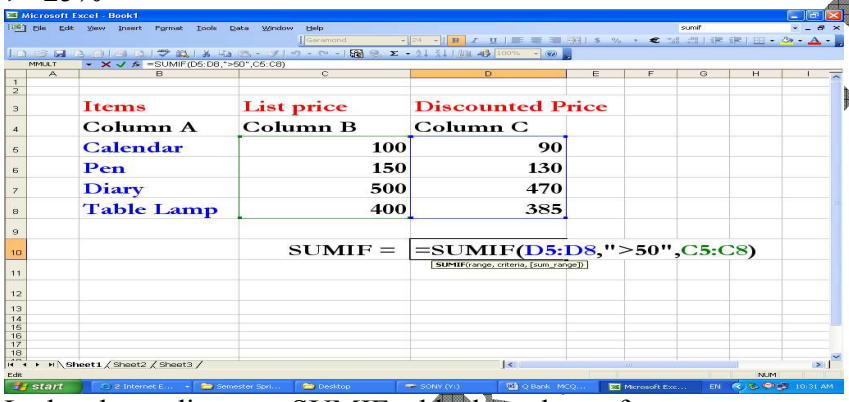
- ► The distributor = Wholesaler = Retailer
- ► The distributor < Wholesaler < Retailer
- ► The distributor > Wholesaler > Retailer
- ► The distributor > Wholesaler but the Wholesaler = Retailer

Which of the following is the correct formula for calculating the contribution margin

- ► S-VC
- ► VC-S
- ► S-FC
- ► FC-S

The net price of a computer table is 2500 and list price 3000. The trade discount will be

- ► 13%
- ► 17%
- ► 21%
- ► 25%



In the above diagram, SUMIF adds the values of

- ► Column A
- ► Column B
- ► Column C
- ► None of the above.

Let's assume that you are receiving 1000 Rs. every year, and you invested each payment at 5%. The amount you would have at the end of five years period is referred as

- ► Final Value
- ► Cumulative interest
- ► Accumulated value
- ► Principal value

$A = [1]$, then which statement is wrong about A?

- ► A is a column matrix.
- ► A is a row matrix.
- ► A is an identity matrix.
- ► A is not a square matrix.

If 250 is increased to 300, then percentage increase will be

- ► 16.67
- ► 20
- ► 23
- ► None of these

The value of x after solving the following linear equation is

$$-2x + 6 = 4x - 2$$

- ► 0
- ► 3
- ► 1/2
- ► 4/3

If a matrix has four column and 5 rows then its dimensions are

- ► 20
- ► 4x5
- ► 5x4
- ► 5x5

The value of x for the equation -(-x - 5) = x – 2 is ----------

- ► no solutions
- ► -5
- ► 3
- ► 1 / 2

This example returns the depreciation for an asset that costs Rs. 10,000, with a salvage value of $8,000. The useful life of the asset is 5 years. The depreciation is being calculated for the third year, and there are 10 months in the first year.

- ► =DB (10000, 5, 8000, 3, 10)
- ► =DB (10000, 8000, 5, 10, 3)
- ► =DB (10000, 8000, 5, 3, 10)
- ► =DB (10000, 8000, 10, 3, 5)

To add numbers based on multiple conditions we use

- ► IF and SUM functions
- ► DSUM function.
- ► AVERAGE function.
- ► All functions given in above choices .

If the basic salary of an employee is 8, 000 Rs. allowances are 6000 Rs. and total cost of leaves per year is equal to 28280 Rs. then the cost of leaves as percent of gross salary is

- ► 29.46%
- ► 16.83%
- ► 22.23%
- ► 28.28%

You purchase equipment for $42,000, minus trade discount of 30% ,20% ,15%. Trade discount will be

- ► $19,992
- ► $22,008
- ► $23,520
- ► $29,400

Given Old Sale price = $1.95 , Markdown rate =13.6% ,then $Mark down will be

- ► $ 0.27
- ► $ 0.72
- ► $ 0.66
- ► $ 0.92

Which function calculates your monthly payment?

- ► PMT
- ► NPER
- ► PV
- ► all of these choices

The sales of a company increases from $100,000 last month to $120,000 this month. the percentage change in profit for the month?

- ► 20%
- ► 40%
- ► 10%
- ► 60%

The temperature was 30□C in the afternoon and the temperature dropped to 26□C in the evening. Find the percentage change in the temperature.

- ► 13.33%
- ► 15%
- ► 14.26%
- ► 12%

In a room, there are 9 boys and 12 girls the ratio of girls to boys is

- ► 9 to 12
- ► 12 to 21
- ► 12 to 9
- ► 21 to 9

What will be the rate of 20 as a base and percentage is 25?

- ► 120%
- ► 125%
- ► 130%
- ► None of these

1^0=?

- ► 1
- ► 0
- ► infinity
- ► undefined

Ali has improved his typing speed from 40w/m to 60w/m.The percentage improvement is

- ► 20%
- ► 150%
- ► 50%
- ► 30%

(2) ^-2 = ……..

- ► 0.35
- ► 0.25
- ► 0.45

► 0.55

The cost price of certain item is Rs 50 and its selling price is Rs 80. What is the markup percentage?

► 50%
► 60%
► 70%
► 80%

All formula in Excel start with

► +
► =
► -
► %

$$\begin{pmatrix} 2 & 1 \\ 3 & -4 \end{pmatrix}\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$$

Product: =

► $\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$

► $\begin{pmatrix} 3 & 1 \\ 3 & -3 \end{pmatrix}$

► $\begin{pmatrix} 2 & 1 \\ 3 & -4 \end{pmatrix}$

► $\begin{pmatrix} 1 & 1 \\ 3 & -5 \end{pmatrix}$

Cost analysis provides the following information:
Fixed Costs (FC) **per period** = Rs. 20000
Variable Costs (VC) = Rs. 30 **per unit.**
Selling price per unit = S = 50 Rs . Contribution Margin will be

► 20 Rs
► 80 Rs
► 16 Rs
► 26 Rs

Four friends take an IQ test. Their scores are 96, 100, 106, 114. Which of the following statements is true?

► The mean is 103.
► The mean is 104.
► The median is 100.
► The median is 106.

Find x if 3(x + 2) - 7 = 11.

- ► 2
- ► -4
- ► 6
- ► 4

If there is a -30% change in the price of an item, what does the negative sign show?

- ► The price is increasing.
- ► The price is decreasing.
- ► The price has low rate of change.
- ► None of the above.

The integer that gives an answer 1 when multiplied to an integer 57 is

- ► 1/57
- ► -57
- ► 1
- ► none

If a birthday cake is cut into eight equal parts then what percent of the cake is a single pie?

- ► 20%
- ► 15.75%
- ► 12.5%
- ► 11%

Which of the following functions is not related to financial analysis?

- ► AMORDEGRC
- ► AMORLINC
- ► CUMIPMT
- ► MDETERM

Solution of linear equations:

$x = y$

$x - y = 1$

- ► Always exists
- ► Is unique
- ► In number of ways
- ► Never exists

Interest paid (earned) on only the original principal borrowed (lent) is often referred to as

- ► simple interest
- ► present value
- ► future value
- ► compound interest

Sum of annuity is always

- ► Present value
- ► Future value
- ► Net present value
- ► Current value

Find x if 3x + 7 – x = 17.

- ► 5

- ► 4
- ► 12
- ► -5

In a friendly cricket between India and Pakistan, Pakistan is scoring at a rate 7% more than India in 35 overs. If the India's score after 35 overs was 230 what's Pakistan score now?

- ► 250
- ► 235
- ► 246
- ► 240

If **Selling Price** = Rs. 5890 and **Markup Rate** = 59.5 % then the **Cost Price** is equal to

- ► Rs. 3229.70
- ► 3692.79
- ► 2385.45
- ► 3504.55

The price of a fountain pen was Rs.15 which grew to Rs. 19.50. Find the percent change.

- ► 3%
- ► 0.3%
- ► 30%
- ► 0.03%

If a and b are any two integers such that a=<b then a-b is

- ► positive or zero
- ► negative or zero
- ► negative
- ► zero

The text concatenation operator is used to

- ► include ":" and ","
- ► calculate exponentiation: ^
- ► combine two text strings
- ► make comparisons.

Percent. Symbol: % is Excel arithmetic operator.

- ► True
- ► False

Find A in the formula A = LW if L = 4 and W = 2.5.

- ► 6.5
- ► 2.9
- ► 10
- ► 1.0

Solve x – 16 = 12 for x.

- ► 4
- ► 28
- ► –4
- ► –28

If **Sale Price** = Rs. 3810 and **Original Price** = Rs. 7270 then the **Markdown Rate** is equal to

- ► 47.59 %

► 45.57 %
► 43.53 %
► 48.9 %

Which of the following percent is house rent of the basic salary?
► 2.5%
► 45%
► 5%
► None of these

In classroom, there are 18 boys and 20 girls. Then ratio of girls to boys is
► 9 to 12
► 18 to 20
► 10 to 9
► 9 to10

Markdown means a reduction from the
► Original cost price
► Original sale price
► Original Net price
► None of these

….. Arithmetic operations provide the foundation for all mathematical operations are:
► 4
► 5
► 3
► 6

Contribution Margin is the Rs. amount that is equal to ----------
► S – VC
► VC – S
► FC – VC
► VC – FC

If ratio of boys and girls in a class is 7: 5, which of the following can't be the total number of the students in the class?
► 36
► 50
► 60
► 120

Assume you will work for the next 20 years and at the end of each year you will deposit $20,000 into a savings account. At the end of that 20 year period you will start withdrawing your retirement living expenses from that account at the beginning of every year. This financial plan involves a _____ problem while you are working and a _____ problem while you are in retirement.
► a present value of a dollar, future value of a dollar
► a future value of an annuity due, a present value of an annuity due
► a future value of an annuity due, a present value of an ordinary annuity
► a future value of an ordinary annuity, a present value of an annuity due
► a future value of an ordinary annuity, a present value of an ordinary annuity

Monthly installments of a leased car are calculated by using the techniques of:
- Simple interest method

- Compound interest method
- Annuity
- Hit & trial method

According to taxation rules; the amount of allowances is treated tax free if it is upto _____ of the basic salary.

- Half of
- One third
- 40%
- One fourth

$$A = \begin{bmatrix} 2 & 6 \\ 3 & 4 \end{bmatrix} \qquad B = \begin{bmatrix} 1 & 9 \\ 3 & 3 \end{bmatrix}$$

,then AB is ----------

- $\begin{bmatrix} 20 & 36 \\ 25 & 30 \end{bmatrix}$
- $\begin{bmatrix} 20 & 36 \\ 35 & 30 \end{bmatrix}$
- $\begin{bmatrix} 20 & 36 \\ 15 & 39 \end{bmatrix}$
- $\begin{bmatrix} 20 & 36 \\ 45 & 39 \end{bmatrix}$

Can we subtract a positive integer k from the identity matrix?

- Yes
- No

The break even point is a point when ----------

- Revenue is greater than cost.
- Revenue is less than cost.
- Revenue is exactly equal to cost.
- None of the above.

The price at which investors buy or sell a share of stock at a given time is referred as

- Face value
- Market value
- Accumulated value
- Earning value

If the salary of an employee is 10,000 and his allowances are 5,000 then what is the taxable income of the employee?

- 5000
- 10000
- Zero

- 15000

The determinant of a square matrix is ----------
- Matrix
- Number
- Only a positive number
- Only a negative number

VDB returns the depreciation of an asset for
- Zero period
- One period
- Two period
- Any arbitrary period

There is an investment of _____ of basic salary on behalf of the employee in Provident Fund
- 1/11th
- 2/11th
- 3/11th
- 5/11th

The formula for finding BEP in units is given by
- FC/VC
- FC/(S-VC)
- CM/FC
- CM/VC

Ali has bought his new motorcycle on installments. He will pay Rs. 2000 for 30 months. If the bike currently cost Rs. 54000 what percent of current cost he will pay more after 30 months.
6%
15%
11.2%
10%

If the basic salary of an employee is 13000 what is the amount of allowances he is getting for his conveyance?
325
260
765
500

Gross salary is also called Net salary
True
False

Order of a Matrix =
Number of Columns xNumber of Rows
Number of Rows / Number of Columns
Number of Rows x Number of Columns
None of these

Which of the following formulas is the correct formula for calculating selling price
Cost price (1+Cost price × %Markup on cost)
Cost price (1+ %Markup on cost)
Cost price (Cost price × %Markup on cost)

Cost price (Cost price + Cost price × %Markup on cost)

Given list price of shirt = $20 , Discount = 10% ,Net price will be
$ 16
$18
$20
$22

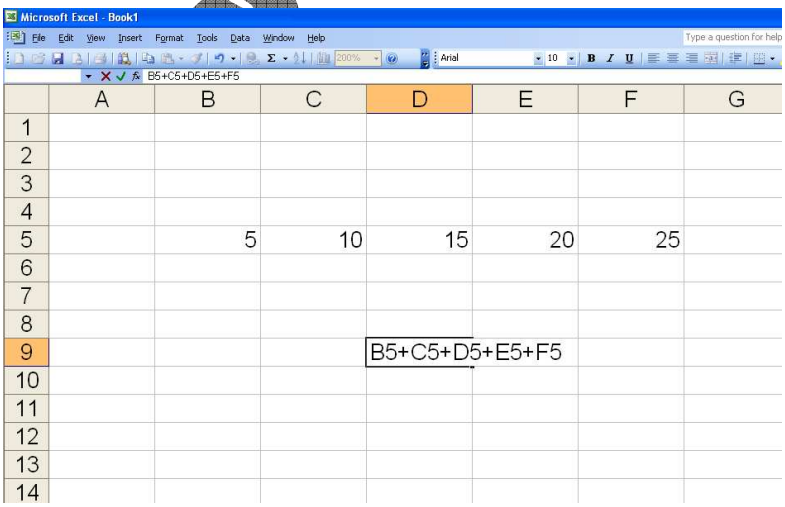
The algebraic expression of the form *ax^2+bx+c* is called
monomial
binomial
quadratic equation
trinomial

Ali, Bilal and Saleem play cricket. Ali's runs are to Bilal's runs and Bilal's runs are to saleem's as 4:3. They get altogether 111 runs. How many runs does Bilal make?
56
46
36
26

Negative sign with net income means
Net profit is zero
Net Loss
Net income is not sufficient
Negative sign cannot come with net income

What shall be contribution margin if sale price is Rs.50 and variable cost is Rs.30?
Rs.80
Rs.20
Rs.30
none of these

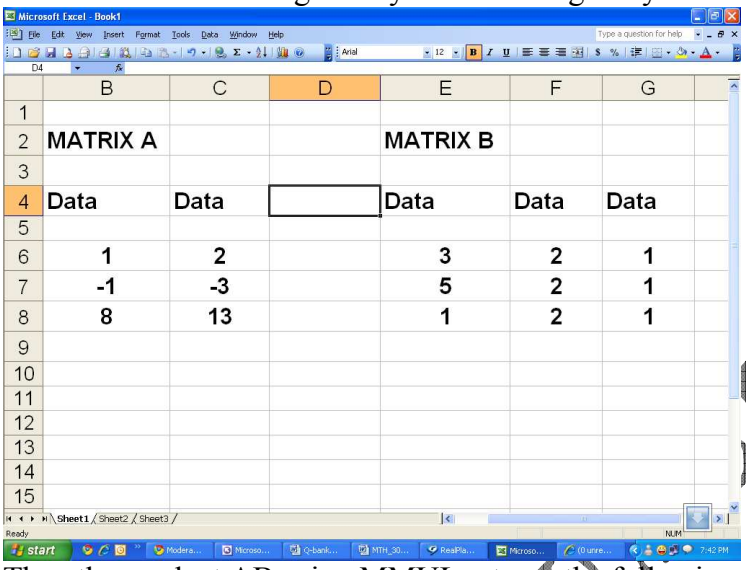
Discounts that are deducted one after the other from the list price are called _____ .
Series trade discount
Inconsequential trade discounts
Spontaneous trade discounts
Earned trade discounts



What result will I get when press enter in cell D9?
75
B5+C5+D5+E5+F5
Error
Cannot be determine

The sales of a company increases from Rs.100,000 last month to Rs.120,000 this month. The percentage change in profit for the month?
20%
40%
10%
60%

If A and B are two matrix given by the following arrays



Then the product AB using MMUL returns the following answer
B
#VALUE!
A
I

Net income can be calculated by using
Net income = Number of units sale above break even point * Price per unit
Net income = Total number of units sold * Price per unit
Net income = Number of units sale above break even point * contribution margin per unit
Net income = Total number of units sold * contribution margin per unit.

$$B = \begin{bmatrix} 2 & 3 \\ 4 & 1 \end{bmatrix}$$

If you want to multiply a number 7 to matrix then the result is

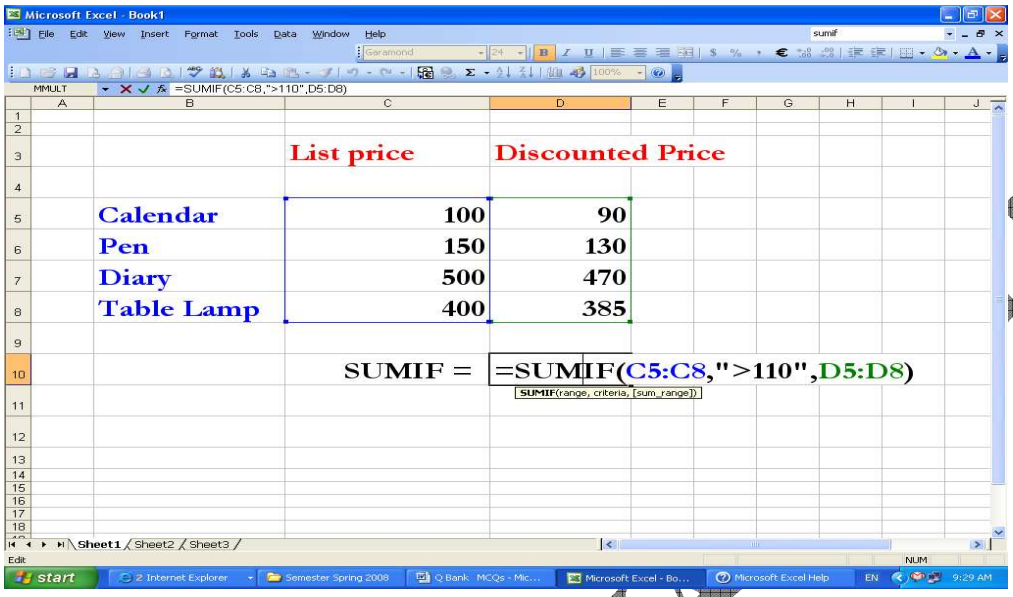
$$\begin{bmatrix} 14 & 3 \\ 28 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 21 \\ 4 & 7 \end{bmatrix}$$

$$\begin{bmatrix} 14 & 21 \\ 28 & 7 \end{bmatrix}$$

Number cannot be multiply to matrix

Stock represents a claim on the company's
Assets
Earning
Asset and earning
Share



What will be the answer of the SUMIF formula?
1075
985
855
130

If you invest some amount at an interest rate of 8%, then at the end of 9 years.
What will be the value of Accumulation Factor?
12.736
12.487
12.965
12.856

If the salary of an employee is as follows:
Basic salary = 12,000 Rs.
Allowances = 9,000 Rs.
then the taxable income of employee is ----------
Rs. 12,000
Rs. 21,000
Rs. 15,000
Rs. 9000

A square matrix A, has an inverse if,

$|A| \geq 0$

$|A| \leq 0$

$|A| \neq 0$

$|A| = 0$

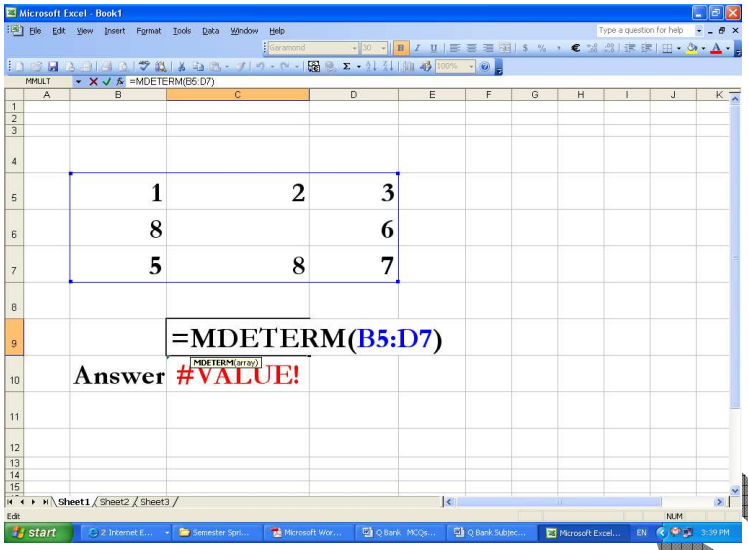
The Basic salary of an employee is Rs 7,000 and the allowances are Rs 3000. Then the social charges will be ----------.

Rs 2030

Rs 2900

Rs 2500

Rs 2150



The answer of the above formula is #VALUE!. The reason of this answer is

Inverse of the matrix does not exist.

It has one blank cell.

Number of rows and columns are equal.

The keys CTRL+SHIFT+ENTER were not pressed simultaneously.

Linear equation: $x - y = 0$ has the solution only if

$x > y$

$x < y$

$x = y$

$x \neq y$

SLN returns the straight-line depreciation of an asset for

Zero period

One period

Two periods

Three periods

If C is the cost and S is the selling price of a certain item then the formula for its markup is given by

(S-C)/S *100%

(S-C)/C *100%

(C-S)/S *100%

(C-S)/C *100%

Which of the following is linear equation
2x-3y=-6
x+x+x
$520x^2y^2$
y^2 -3=0

A polynomial: $x^2+(x+1)$ is a special case of
mono-nomial
bi-nomial
tri-nomial
None of these as expression is incorrectly expressed.

LONG QUESTIONS:

	A	B	C	D
1				
2				
3				
4				
5				
6			2400	Cost
7			8/19/2008	Date Purchased
8			12/31/2008	End of First period
9			300	Salvage value
10			1	Period
11			0.15	Deprication rate
12			1	Actual basis
13			=AMORDEGRC(C6,C7,C8,C9,C10,C11,C12)	
14				

What is the purpose of above given function and why we have used here with respect to give data?

An item originally priced at $55 is marked up 25% . What is the sale price? 2

Cost analysis provides the following information:
Fixed Costs (FC) per period = Rs. 20000
Variable Costs (VC) = Rs. 30 per unit.
Selling price per unit = S = 50 Rs
Production Capacity per period = 800 units
Contribution Margin per unit =Rs 20
. Calculate BEP in Rs . 3

An order for power tools has a Rs. 3000 net price after a 20% trade discount. What is the list price? 3

If fixed cost is Rs. 2500, variable cost is Rs.155, sale is Rs.205, and total numbers of units sold are 105 then find the number of units sold above break even point (BEP). 5

The price of building material is Rs. 200,000. 5
The series discounts are 20%, 8%, 2%.
What is the single equivalent discount rate. Also find Rs discount?

After marketing analysis, calculate the break even point in rupees provided that
Fixed Cost = Rs.500, Contribution Margin = Rs.250 & expected sale rate is 1000 per item. 2

Define merchandising. 2

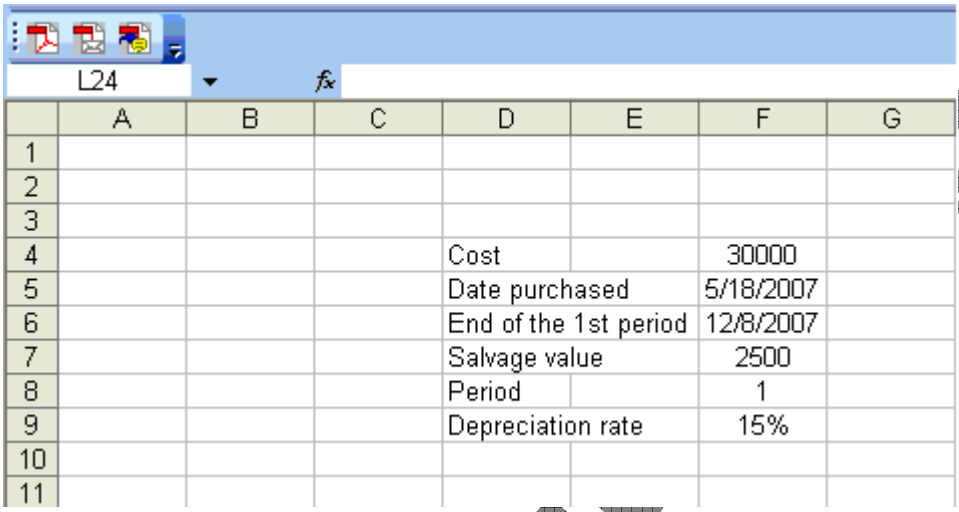
An item is marked down 15%; the sale price is Rs. 127.46. What was the original price? 3

A product can be sold for Rs.50 per unit. Cost analysis provides the following information. Fixed cost per period is Rs8640 and variable cost is Rs.30 per unit. Find the contribution rate. **3**

Given that the angles of a quadrilateral are in the ratio 1:2:3:4, find the angles **5**

6 stools and 4 chairs cost $58 but 5 stools and 2 chairs cost $35. Find the cost of each stool and each chair.**5**

To find First period depreciation from the values in figure ,we use one of formula given below **2**



L24

	A	B	C	D	E	F	G
1							
2							
3							
4				Cost		30000	
5				Date purchased		5/18/2007	
6				End of the 1st period		12/8/2007	
7				Salvage value		2500	
8				Period		1	
9				Depreciation rate		15%	
10							
11							

(i) =AMORLINC(F4,F5,F6,F7,F8,F9)
(ii) =AMORLINC(F4,F5,F6,1,F8,F9)
(iii) =SLN(F4,F5,F6,F7,F8,1)
(iv)=DDB(F4,F5,0,F7,F8,F9)

Find the single discount rate equivalent to a series of discounts of 30% and 40%. 2

Calculate the Break Even Point (BEP) as a percent of capacity when an organization introduces an article. Market analyst of the organization gives the report that the product can be sold at Rs. 500 per unit. In addition to this, cost analysis provides the following information:
Fixed Cost (FC)= 8000,
Variable cost (VC)= 300,
Production Capacity (PC) = 900 3

The price of pants and shirt are Rs 950 and Rs 550 respectively. If the same discount is given on the pants and shirt, then price of pants will be 2 times greater than the price of shirt. What is the discount? 3

Define multiplicative inverse of a matrix and verify that if 5

$$A=\begin{bmatrix}5 & 3\\ -1 & 2\end{bmatrix} \text{ and } B=\begin{bmatrix}-3 & -8\\ 1 & 4\end{bmatrix}$$

$$(AB)^{-1} = B^{-1}A^{-1}$$

Then .

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} then\ A^{-1} = \frac{1}{ad-bc}\begin{bmatrix} d & -b \\ -c & a \end{bmatrix}, ad - bc \neq 0$$

Hint: If

Find BEP in Rupee if 5

FC = Rs. 3160
VC = Rs. 160
S = Rs. 190

If Aslam earns Rs.500 for 6 hour of a week, what is Aslam's pay of rate? 2

An article costing Rs.500 is sold at 10% loss. Find its selling price. 2

The price of pants and shirt are Rs 950 and Rs 550 respectively. If the same discount is given on the pants and shirt, then price of pants will be 2 times greater than the price of shirt. What is the discount? 3

A computer software retailer used a markup rate of 40% on cost . Find the selling price of a computer game that cost the retailer $25. 5

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10 Marks

If the Basic salary of an employee is Rs 9000 and Allowances are Rs 4,500.

(a) What is the total saving of the employee per month on account of Provident Trust Fund?

(b) What is the taxable income of employee?

(c) What is the amount of allowances if House Rent = 45 %, Conveyance allowance = 2.5 % and Utilities allowance = 2.5 %?

What is the difference between markup and margin? 2mks

An item originally priced at $55 is marked 25% off. What is the sale price? 3mks

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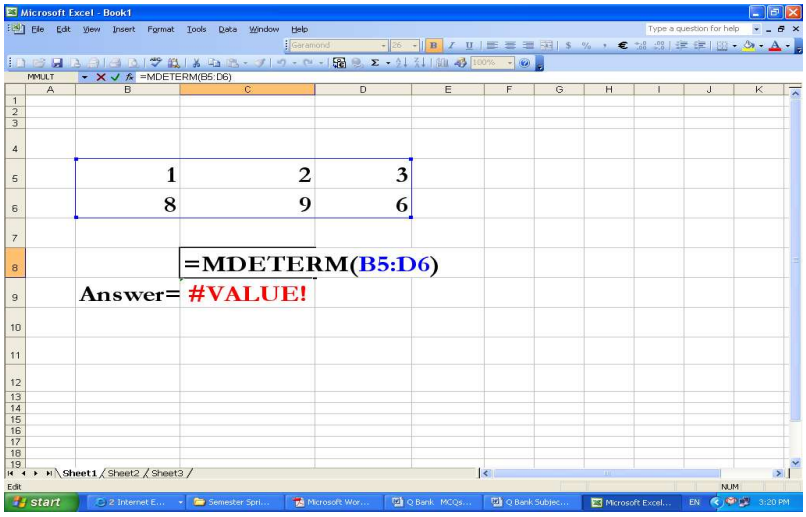
5mks

Calculate the Break Even Point (BEP) in units when an organization introduces an article. Market analyst of the organization gives the report that the product can be sold at Rs. 500 per unit. In addition to this, cost analysis provides the following information:

Fixed Cost (FC)= 8000,
Variable cost (VC)= 300,
Production Capacity (PC) = 900



Give reason why the answer of the above formula for Determinant is #VALUE! 2mks

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10mks

A light charger manufacturing company sells its new item at Rs. 560 per unit. If the variable cost is Rs 470and the fixed cost is Rs 6500. if the production capacity is 400 per period, find the BEP in units and as percentage of capacity.

You borrow $10,000 for 60 days at 5% simple interest per year (assume a 365 day year). Find the simple interest? 2mks

---

An item originally priced at Rs. 55 is marked 25% off. What is the sale price? 2mks

---

3mks

An item that regularly sells for $425 is marked down to $318.75. What is the discount rate?

5mks

Find the selling price and amount of the profit for a product which costs Rs.2000 and has the mark up rate of 30%.

10mks

A person works in a public sector whose basic salary is Rs.8000.Calculate his gross remuneration.

2mks

Find the unknown x in the proportion: (3x + 2) : 4 = (x + 1) : 2

2mks

Solve the following system of equations

$$x-2y = 3;\ 2x-y=3.$$

3mks

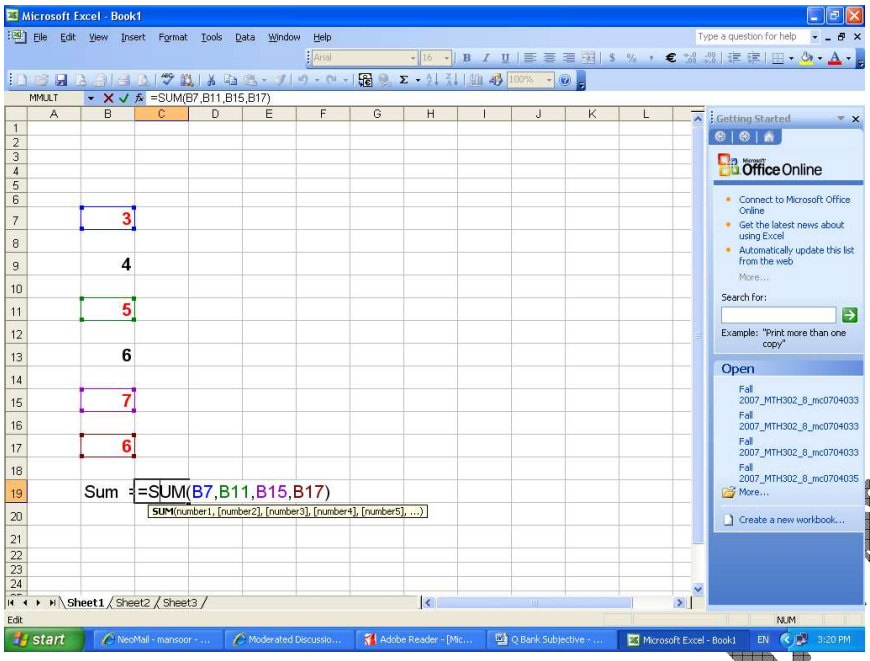
What will be the value of $550 compounded at 12% for 3 years.

5mks

Cindy used part of an insurance settlement to purchase an ordinary annuity that would pay her $5,000 each six months for 10 years. How much did the annuity cost if the interest rate is 10% compounded semiannually?(discounted value)

10mks
Payments of $750 at the end of month for 3 years at 9% compounded monthly. Payments of $550 beginning of month for 4 years at 6% compounded monthly. Which has greater present value (discounted value)?

2mks
How will you add the non adjacent numbers?



2mks
An order for power tools has a Rs. 3400 net price after a 80% trade discount. What is the list price?

3mks
A retailer originally sold for Rs.800 and was marked down to sell for Rs.500. Find the percent markdown based on the original price.

5mks
Payments of $5,000 were made at the end of each quarter into an account that pays 11% compounded quarterly. How much was in the account after six years?(Accumulated Value)

10mks
Given

Grade of Labor	Labor hours per unit of labor	Hourly wages (Rs)
Skilled	4	400
Semiskilled	3	350
Unskilled	3	250

find weighted average of wages

2mks
Calculate the percentage markup on an automobile spare part sold at thrice of its cost price.

2mks

In a gallop survey, the numbers of comments given by women were 50% of the number of men. What percent of the entire survey responded by women?

3mks

You want to calculate the cumulative interest paid on a $1,000,000, ten-year equipment loan that charges 9% interest and requires monthly payments arranged at the beginning of the month. Further suppose that you want to calculate the cumulative interest payments made over the first five years, or sixty months. To make this calculation, which one of the following formula you will use ?

(i) =CUMIPMT (.09/12,10*12,1000000,0,60,0)
(ii) =CUMPRINC(.09/12,10*12,1000000,1,60,1)
(iii) =CUMIPMT (.09/12,10*12,1000000,1,60,1)
(iv) =IPMT(.09/12,10*12,1000000,1,60,1)

5mks

Suppose 2 DSL companies sale their 256K connection for Rs.1000 per month, 512K connection for Rs. 1700 per month and 1MB connection for Rs. 2400 per month and 4MB connection for Rs. 3500 per month.

The table below summarizes the number of connections both companies have

	256 K	512K	1MB	4 MB
Company A	150	65	20	6
Company B	200	160	60	20

What is total revenue of Company A in a year?
What is total revenue of Company B in a month?
Matrices must be used to illustrate the above information.

10mks

The manager of a mutual fund placed 30% of the fund's available cash in a 6% simple interest account, 25% in 8% corporate bonds, and the remainder in a money market fund that earns 7.5% annual simple interest. The total annual interest from the investments was $25,875. What was the total amount invested?

What is the difference between markup and margin? 2

If you buy 1200 shares at Rs. 32 per share with a 3% commission, calculate your total cost 2

Suppose you bought something that was priced at $6.95, and the total bill was $7.61. What is the sales tax rate in this city? (Round answer to one decimal place.) 3

Suppose your won a prize of Rs. 1,000,000, which will be paid to you in annual installments of Rs. **50,000** over **20 years**. How much did you really win, assuming that you could earn **5% interest, compounded annually**? 5

Multiply the following matrices: 2

$$A = \begin{bmatrix} 2 & 3 & 2 & 1 \end{bmatrix} \quad B = \begin{bmatrix} 1 \\ 3 \\ 2 \\ 1 \end{bmatrix}$$

An article costing Rs.500 is sold at 10% loss. Find its selling price. 2

Find BEP in units if 3

FC = Rs. 3160
VC = Rs. 160
S = Rs. 190

Find the Net cost price where list price is 5500 Rs and discount is 15%. 5

Mr. Asif bought 200 shares at Rs. 62.25 each and sold them after 1 year at Rs. 78. With a 1% commission rate of buying and selling the stock and 10 % dividend per share is due on these shares. Face value of each share is Rs.10. Find his return on investment. 10mks