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Formula:-

(1) DA = B2 * 110/100

(2) HRA = B2 * 30/100

(3) PF = B2 * 10/100

(4) TL = F2 * (G2/2)

(5) LD = (B2/30) * H2

or, LD = (B2 * H2)/30

(6) NS = (B2+C2+D2) − (E2+I2)

[3] PAGE LAYOUT TAB

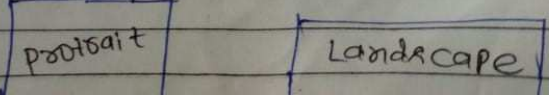
(i) Themes (Group) :-

(a) Themes
(b) Colors
(c) Fonts
(d) Effects

(ii) Page Setup (Group)

(a) **Margin** :- This option is used to set the margin size for the entired document or the current section.

(b) **Orientation** :- it is used to Give your page a Portrait and Landscape layout.



(c) **Size:-** It is used to choose a Paper Size for your document.

(d) **Print Area:-** It is used to mark the specific area of sheet for printing.

I.m selectone cell → 1 cell.

(e) **Breaks:-** It is used to insert Page break As well as two remove also.

(f) **Background:-** It is used to set/ remove background picture behind the sheet.

(g) **Print Title:-** This option is used to choose row and columns you like to repeat on each printed Page.

(ii) **Page:-** It is used to set the Page orientation (portrait/ landscape).

Note:- **Page Size:-** A4, A5, B4, B5, - - - etc.

(iii) **Margin:-** It is used to set margin left, Right, top, buttom and Header or footer.

Date

(iii) Header and Footer :- It is used to set header and footer for different page and same for each page.

(iv) Sheet :- It is used to set repeat row and column, gridline and row and column heading. and many more setting for Sheet.

(iii) **Scale to Fit:-**

(a) Width [Automatic]

(b) Height [Automatic]

(c) Scale [100%]

(iv) **Sheet Option :-**

(i) Gridline :-

~~(a) View :-~~

(a) [✓] View :- It is used to show or hide the gridline.

(b) [✓] Print :- It is used to set gridline for Printing.

#gridline

Date

(1) Text Function :-

(a) **Char( ) :-** This function return character value of specific ASCII Code.

Eg :- (i) = Char(65) ↵ R → A

(ii) = Char(97) ↵ R → a

ASCII Code
A-Z = 65-90
a-z = 97-122

	A	B
1.	0	= Char(A1) ↵
2.	1	
3.	2	
4.	3	
5.	4	
6.	;	
7.	65	A
256.	255	

(b) **Code Function (:) :-**
This function return ASCII code for specific character.

Eg :- (i) = Code ("B") ↵ R → Result → 66

(ii) = Code ("a") ↵ R → 65

(c) Concatenate function( ) :- It joint two text.

Eg: (i) = Concatenate ("East", "Champaran") ↵

R → East Champaran

(ii)

	A	B	C	D
1.	First Name	Middle Name	Last Name	Full Name
2.	Ram	Kumar	Singh	Ram Kumar Singh
3.	Sohan	Kumar	Sinha	Sohan kumar Sinha
4.				
5.				

(2) → = Concatenate (A2, " ", B2, " ", C2, " ") ↵

" " → Use for Space.

Ex (4) = Concatenat(A2, B2, C2) ↵

(d) Left Function(-) :- It returns left most character a/c to Specific Number.

Eg:- (i) = Left ("Motihari", 4) ↵

R → Moti

(ii) = Left ("Vikash", 2) ↵

R → Vi

(e) Right function( ) :- It return right most character according to Specific Number.

Eg (i) = Right ("Sachin" 4) ↵

R → Chin

(ii) = Right ("Motihari" 4) ↵

R → hari

(F) Lower Function ( ) : It convert upper case letter into lower case letter.

Eg :- (i) = Lower ("AKASH") ↵

R → (Akash)

(g) Upper function ( ) . It Convert - lower case letter into upper case letter

Eg (i) = Upper ("akash") ↵

R → AKASH

(h) Len function ( ) : It returns length of given character.

Eg : (i) = Len ("Akash") ↵

R → 5

(I) ~~Exact fu~~

(ii) = Len ("ALOK") ↵

R → 4

(iii) = Len ("SANJANA - KUMARI") ↵ R → 13

(I) Exact function() :- This function return true both argument are same otherwise false.

Eg (i) = Exact("Akash", "Akash") ↵ R→ True

(ii) = Exact("Akash", "akash") ↵ R→ False

(J) Trim() :- This function remove all blank space.

eg (i) = Trim("----Akash----") ↵
↳ Space
R→ Akash

(I) Repeat / Rept() :-
It repeats the given text specific number of times.

eg (i) = Rept("Ram", 4) ↵
R→ RamRamRamRam

(ii) = Rept("Ram ", 4) ↵
↳ Space
R→ Ram Ram Ram Ram

Upper Case (Capital letter)
Lower Case (Small letter)

(L) Mid():- It return the character from the middle of a text string given a starting position and length.

Ex:- =Mid("Champaran", 3, 4)

Result = ampa

(M) Proper():- It Convert a text to proper case the first letter in each word in upper case and all other letter to lower case.

Ex: =Proper("ram is a good boy") ↵

R = RAM IS A GOOD BOY.

* Error Type in MS EXCEL *

(1) ###:- It mins the column is not wide enough to display the number.

A column wide

Ex:- | 45678 | 9 Result :- | 4567## |

(2) #Name :- Name not regnize Excel. does not regize.

Ex: (i) | 60 | Ram | =A1+B1+C1 ↵

R = #NAME

(ii)

A	B	C	
60	70	80	=Sum(A1, B1, C1) ↵

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(3) #Value :- It means the formula contains an invalid operation.

→ Argument is wrong type.

Ex: (i)

	A	B	C
1.	60	R	=A1+B1 ↵

R = #Value!

(4) #Div/0! → It means dived/0 Errors.

Ex: - =100/0 ↵ R = Div/0

(5) #Num! :- Due to wrong value.

Ex. - (i) SQRT(100)↵
R → 10

(2) SQRT(-100)↵
R = #Num

(6) Null! :- Intersection of two range that do not Intercept.

	A	B	C
1.	60	70	80

Ex: (i) (ii) = A1+B1 (space bar) C1 ↵

R = #Null!

(iii) = Sum(A1, B1, C1)↵ R = #Null

Date

N/A :- It means data is not Available.

	A	B	C
1.	Name	Roll No.	Marks
2.	Ram	102	60
3.	Ryu	103	65
4.	Rahul	104	70
5.			

Ctrl + A → Ctrl+Shift+Enter

① Select Table → Home Tab
Format as table → Choose any Design
↓ O.K
Design → Table → Name O.K

② 2nd Select Area :- Ram + Ctrl+Shift+Enter

2

[2] Numerical Function :-

Absolute (Abs) (+)

ⓐ Abs( ) :- It Convert negative value to positive value.

Eg :- Abs(-100) ↵ R=100

ⓑ Mod( ) :- It return remainder value.

= Mod(11,2) ↵ = R → 1

2) 11/5 10 1

Date

(c) Log :- It returns logarithm of number a/c to specific base.

Ex:- log(8,2) ↵

R → 3

2	8	2
2	4	
	2	

(d) Power():- It returns value of 2nd argument is the power of 2nd argument.

$(12)^2 = 144$

Ex.- (i) =POWER(12,2) ↵

R = 144

(ii) = Power(12,1) ↵

R = 12

(iii) 12^2 ↵ 144

R = 144

Pi(π) function):-

(e) Pi( ) :- It returns value of Pi.

Eg:- =Pi( ) ↵

R = 3.141

(f) Sum function( ):- It returns the sum of given number.

Ex: (i) = Sum(60, 70, 80, 70) ↵

(ii) = Sum(60+70+80+70) ↵

(iii) = Sum(A1, B1, C1, D1) ↵

(iv) = Sum(A1:D1) ↵

(g) Round( ):- Rounds a number to a specific number of digit.

Ex:- (i) = Round(10.45, 2) ↵
R = 10.45

(ii) = Round(10.46, 2) ↵
R = 10.47

(iii) = Round(10.456, 3) ↵
Result = 10.456

(iv) = Round(10.45, -1) ↵
R = 10

(v) = Round(10.45, -1)
R = 10.4

(h) Round-up( ) - Rounds a number-up a way from zero(0).

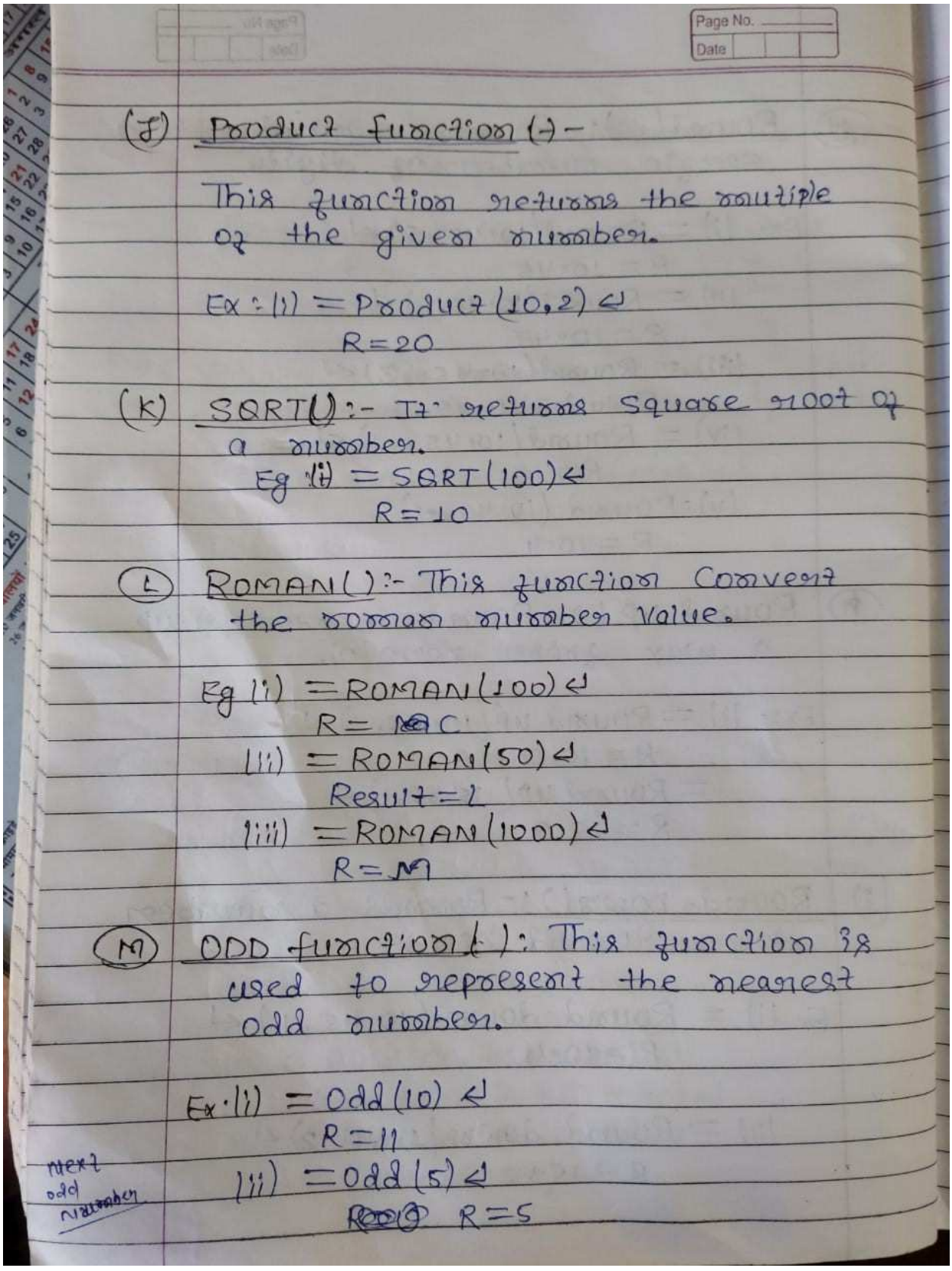
Ex:- (i) = Round up(10.48, 1) ↵
R = 10.5

= Round up(15.82, 1) ↵
R = 15.9

(i) Round-down( ) :- Rounds a number down toward zero.

Ex (i) = Round down(10.45, 1) ↵
R = 10.4

(ii) = Round down(15.42, 2) ↵
R → 15.42



(J) Product function (→)-

This function returns the multiple of the given number.

Ex: (i) = Product (10, 2) ↵
R = 20

(K) SQRT(): - It returns Square root of a number.
Eg (ii) = SQRT (100) ↵
R = 10

(L) ROMAN(): - This function Convert the roman number value.

Eg (i) = ROMAN (100) ↵
R = C
(ii) = ROMAN (50) ↵
Result = L
(iii) = ROMAN (1000) ↵
R = M

(M) ODD function (): This function is used to represent the nearest odd number.

Ex. (i) = Odd (10) ↵
R = 11
(ii) = Odd (5) ↵
R = 5

next odd number

(N) Even function() :- This function is used to represent the nearest even number.

Ex. i) =Even(5) ↵
R = 6

(O) Fact() :- It returns factorial value of a number.

Ex. i) = Fact(3) ↵ 1*2*3 = 6

ii) = Fact(6) ↵ 1*2*3*4*5*6
R = 720 = 720

[3] Date And Time function

(a) Now() :- It returns current system date and times.

Eg: i) = Now() ↵
R → Current system date & time.

(b) Today() :- It returns current system date.

Ex:- = Today() ↵
R = Current System date

(c) Day() :- It returns the day of a date

Ex: i) = Day("09/18/2021") R → 18
mm DD YY

(d) Month( ) :- It returns month of a date.

Ex = Month("09/18/2021")
MM DD YY

R → 09

(e) Year( ) :- It returns the year of a date.

Ex:=Year("09/18/2021")
R = 2021

(f) Formula:-

Year :- =DATEDIF(C3,D3,"Y")

Month :- =DATEDIF(C3,D3,"YM")

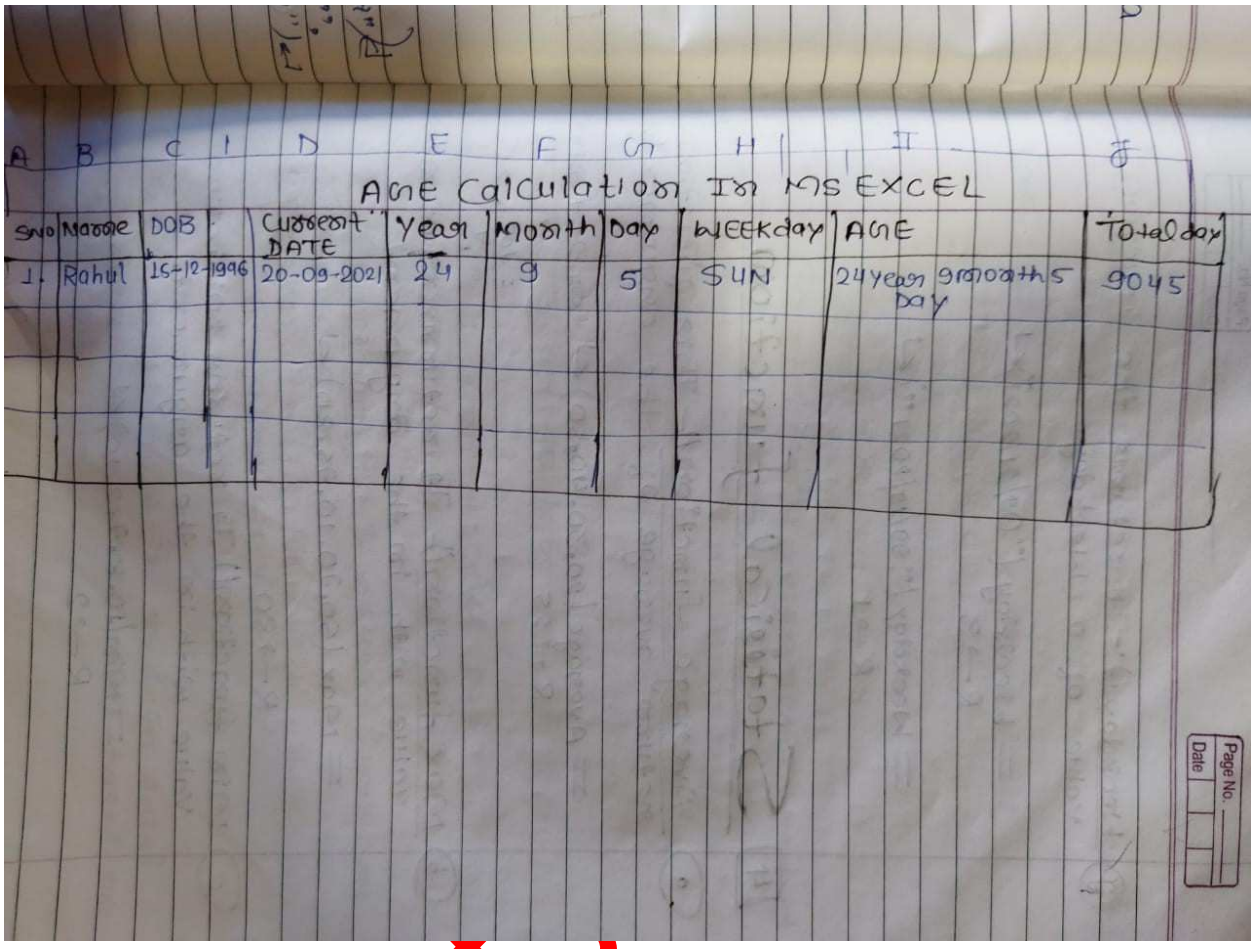
Day :- =DATEDIF(C3,D3,"MD")

WEEKDAY :- =CHOOSE(Weekday(C3),"SUN","MON","TUE","Wed","Thr","Frid","Sat")

AGE :- =CONCATENATE(F3,"Years","",F3,"Month","",G3,"Day")

TOTAL DAY :-
=DATEDAY(C3,D3,"D")

Syntex :-
(i) DD/mm/YY
(ii) MM/DD/YY



A B C D E F G H I J

AGE Calculation In MS EXCEL

S.no	Name	DOB	Current DATE	Year	month	Day	WEEKday	AGE	Total day
1.	Rahul	15-12-1996	20-09-2021	24	9	5	SUN	24 year 9 months 5 day	9045

Page No.
Date

(g) Weekday():- It returns the integer value of a weekday.

= Weekday("09/21/2021") ↵
R → 3

= Weekday("09/19/2021") ↵
R → 1

14 Statistical function:-

(a) Average function():- This function return average of the argument.

= Average(20,30,40,50) ↵
R → 25

$\frac{20+30+40}{4}$

$= \frac{100}{4} = 25$

(b) Max function():- It returns maximum value with in the argument.

= Max(60,70,10,75,80) ↵

R → 80

(c) Min function():- It returns minimum value with in the argument.

= Min(10,8,7,2,10) ↵
R → 2

Date

(d) **Count():-** It returns number of argument.

= Count(60, 70, 80, 40, 60)↵

R → 5

= Count(10, 2, 20)↵

R → 3

(e) **Counta():-** It returns number text of argument.

Project ⑥

	A	B	C
1.	60	70	10
2.		T	
3.	50	2	4
4.	30	5	7

Ex. (i) = Count(A1:C4)↵ R → 9

(ii) = Counta(A1:C4)↵ R → 10

(f) **Countblank():** It returns blank cell of argument.

Project ⑥

= Countblank(A1:C4)↵

R → 2

(g) **Sumif():-** It is used to total average of numeric cell based on a condition.

(h) Countif():- It gives the count of the number of cell specific the condition.

Example of Countif and Sumif function

Project:-

	A	B	C	D	E	F
1.	S.NO.	Name	Post	Salary	NO of doctor	Salary of doctor
2.	1.	Ram	Teacher	25000		
3.	2.	Ramu	Doctor	30000		
4.	3.	Raj	Teacher	20000		
5.	4	Raju	Nurse	15000		

Formula:-

(ii) NO of doctor = =Countif(C2:C5,"doctor")
R → 1

(iii) Salary of doctor =Sumif(C2:C5,"doctor",D2:D5)↵
R → 30000

(iii) Salary of teacher:

=Sumif(C2:C5,"teacher",D2:D5)↵

Result = 45000

Date

[5] Financial function

(1) **Fv(Future Value):-** This function return the future value of an investment based on a period.

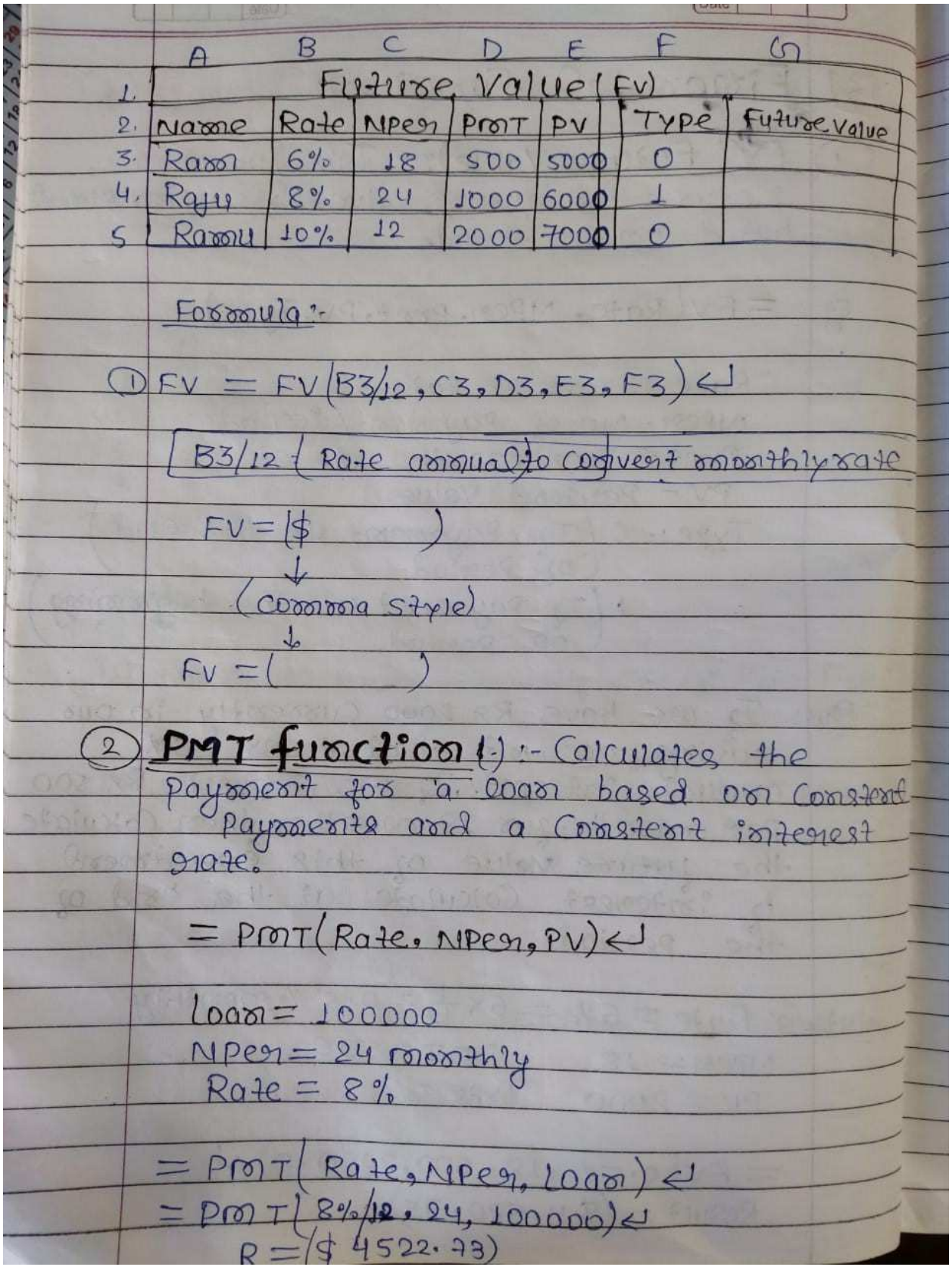
Eg: =Fv(Rate, NPer, Pmt, PV, Type):-

Rate - Interest Rate
NPer - No of Payment/ Period
Pmt - Per month amount
PV - Present Value
Type :- 0 (If Payment at the end of Period)
1 (If Payment at the beginning of Period.)

Qus: If we have Rs 2000 currently in our saving account that earns 6% annual interest. If we deposite Rs 500 per month for 18 months, then Calculate the future value of this investment if interest Calculate at the end of the period.

Solution: Rate = 6% = $6 \times \frac{1}{12} = 0.5$ % monthly
NPer = 18 Pmt = 500
PV = 2000 Type = 0

=Fv(0.5%, 18, 500, 2000, 0) ↵
Result = ($11,580.75)



	A	B	C	D	E	F	G
1.	Future Value (FV)						
2.	Name	Rate	NPer	PMT	PV	TYPE	Future Value
3.	Ram	6%	18	500	5000	0	
4.	Raju	8%	24	1000	6000	1	
5	Ramu	10%	12	2000	7000	0	

Formula :-

① FV = FV(B3/12, C3, D3, E3, F3) ↵

B3/12 (Rate annual to convert monthly rate

FV = ($)

↓

(Comma Style)

↓

FV = ( )

② **PMT function** (-) :- Calculates the payment for a loan based on constant payments and a constant interest rate.

= PMT(Rate, NPer, PV) ↵

Loan = 100000
NPer = 24 monthly
Rate = 8%

= PMT(Rate, NPer, Loan) ↵
= PMT(8%/12, 24, 100000) ↵
R = ($ 4522.73)

Date

	A	B	C	D	E	F
1.		PMT				
2.	Name	Rate	Loan ~~NPer~~	NPer	PMT	PV
3	Ram	8%	100000	24	$4522.73	99,999.9
4	Ryu	10%	200000	36	6453.44	200000
5	Ramu					

= PMT(B3/12, C3, D3) ↵

* Check :-

* PV (present Value) ( ) :-

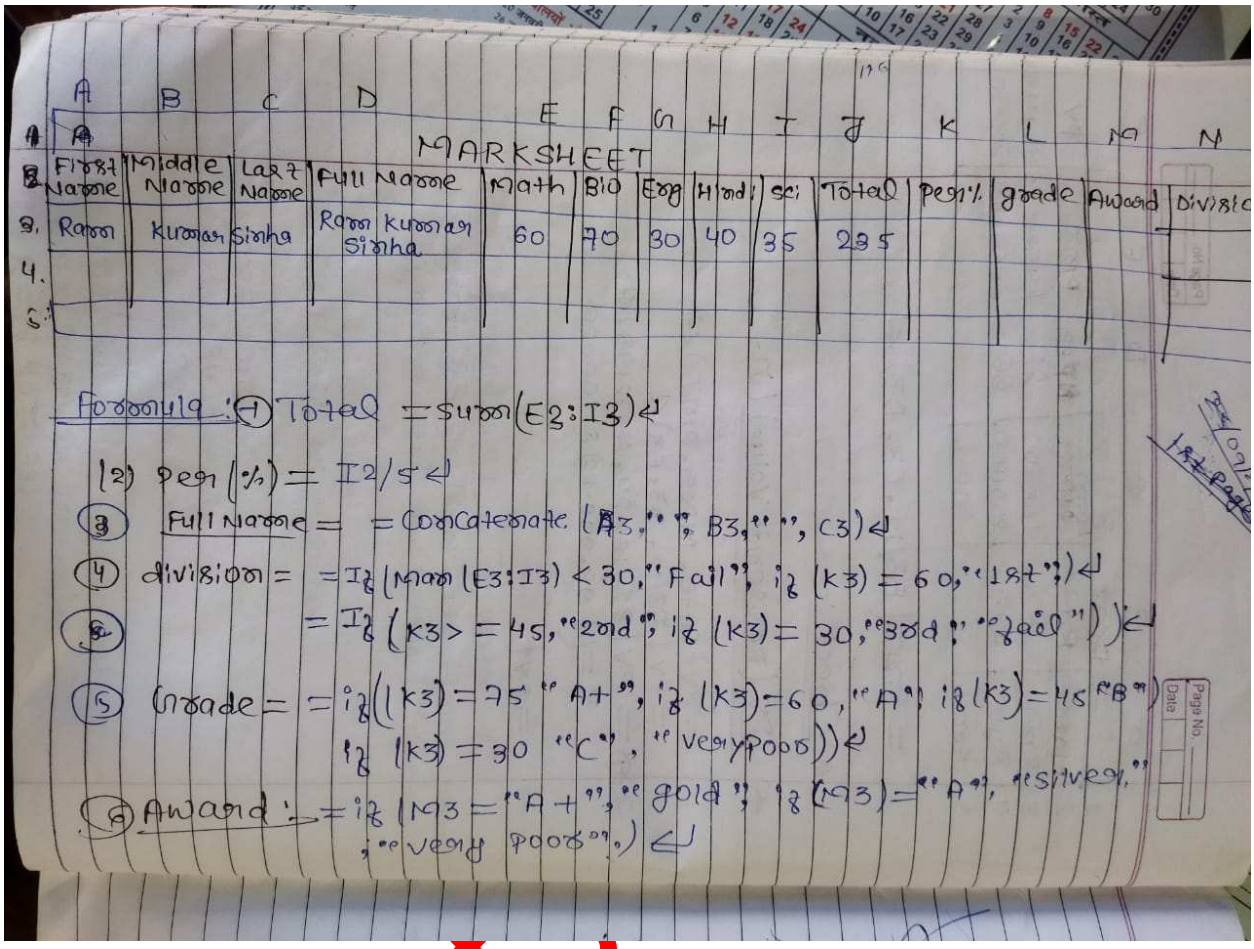
= PV(Rate, NPer, PMT) ↵

= PV(B3/12, D3, E3) ↵

Ex:-① = PV(8%/12, 24, 4522.73) ↵

R = ($ 99,999.89) ≅ 100000

=PV(



MARKSHEET

First Name	Middle Name	Last Name	Full Name	Math	Bio	Eng	Hindi	Sci	Total	Per%	grade	Award	Divisio
Ram	Kumar	Sinha	Ram Kumar Sinha	60	70	30	40	35	235				

Formula : (1) Total = Sum(E3:I3)

(2) Per(%) = I2/5

(3) Full Name = = Concatenate(A3," ", B3," ", C3)

(4) division = = If(Mean(E3:I3) < 30, "Fail"; if(K3) = 60, "1st";)

(5) = If(K3 >= 45, "2nd"; if(K3) = 30, "3rd"; "Fail"))

(6) Grade = = if((K3) = 75 "A+", if(K3) = 60, "A"; if(K3) = 45 "B")
if(K3) = 30 "C", "very poor"))

(7) Award : = if(M3 = "A+", "gold"; if(M3) = "A", "silver",
; "very poor",)

Date

Ex (i) = NOT(60>70)
R → True

(ii) = NOT(60<70) R → False

(2) Insert function :- (Shift + F3)

By the help of this options insert any category of function.

* Defined Name (Group) :

(a) Name Manager (Ctrl + F3) :- This option is used to Creat, edit, delete and find all the name used in the Workbook.

(b) define Name : By the help of this option we can used the name in formula.

Logical function :-

(a) and ():- It returns true if it's R1 and true. Other wies false.

(i) → And (100>80, 60>50) ↵ True
(iii) → And (100<80, 60<30) ↵ False.

(b) or function():- It returns true if of the argument is true other wise false.

Formula: =OR(60>50, 40>30)
R → True
= or(60>50, 40<30)
R → True

(c) not function(): It returns true if argument is true. Otherwise false.

(i) = Not (60>70) ↵
R → True
(iii) = Not (60<70) ↵
R → false

(d) insert function(): (Shift + F3)
By the help of this option we can insert any category of function.

Date

* Defined Name (Group):

(a) Name manager (Ctrl + F3):- This option is used to create, edit, delete and find all the name used in the worksheet.

(b) Define Name: By the help of this option we can used the name in formula.

	A	B	C
1.	60	70	80
2.	100	200	800
3.	700	250	600

Process: Select cell
↓
Formate tab
↓
Define Name (Rammu)↵

(c) Use in formula:- In this option we can choose the name for used in this workbook and insert it into current formula.

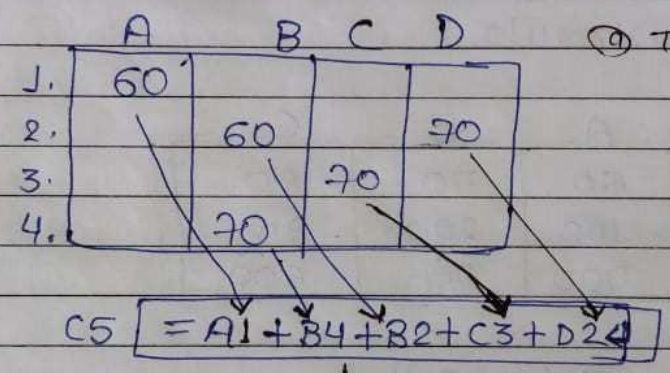
Sum = = Sum (Rammu)↵
Max = = Max (Rammu)↵
Min = = Min (Rammu)↵
Count Blank: = = Countblank (Rammu)↵

[C] Formula Auditing :-

This option is used to ~~format~~ display the relation between formula and cell.

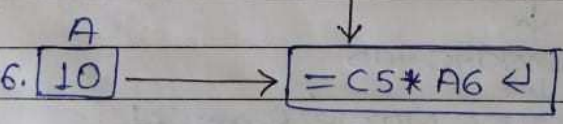
(a) Trace precedents
(b) Trace Dependents
(c) Remove Arrows

(a)



(a) Trace Precedents

(b)



[D] Show Formula:- This function display the formula in each cell inserted of resulting value.

[E] Error Checking: It is used to check common error ~~that~~ in formula.