



PREPARED BY :



For queires :

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2 Time Value of money CF

Take upto 3 decimal's
0.---

Single CF

Yr	CF
1	xxx

Multiple uneven CF

Yr	CF
1	xxx
4	xxx

Perpetuity CF

Yr	CF
1-∞	xxx

$$PV = \frac{CF}{r\%}$$

NO FV because perpetuity means endless CF by extension

Annuity CF

Amount received end of every year

Yr	CF
1-5	xxx

Annuity due (or)
Normal Annuity

Amount received beginning of every year

Yr	CF
0-5	xxx

Annuity Immediate

Amount received in middle years

Yr	CF
3-5	xxx

Mid Annuity

Discounting

$$PV = FV \times \frac{1}{(1+r)^n}$$

Compounding

$$FV / \text{Terminal Value} = PV (1 + \frac{r}{n})^{n \times k}$$

↓
NO OF PMTS in a year

Equated Monthly Monetary Installment = $\frac{\text{Loan Amt}}{AF(x, y\%)}$

Logic $CF \times PVAF = DCF$
 $CF = \frac{DCF}{PVAF} = \frac{\text{Loan}}{AF}$

because PV $\leftarrow \frac{1}{(1+i)^n}$

Effective Annual Interest Rate (EIR) = $\left(1 + \frac{i}{m}\right)^{m \times n} - 1$
always 1 because annual int. rate
int paid m times

Magic of compound int $\frac{72}{i\%} = \text{No. of Yrs to double the amount}$

To find missing fig $FV = PV (1+r)^n$ to find 'r'

$$\frac{FV}{PV} = (1+r)^n \rightarrow \sqrt[n]{\frac{FV}{PV}} - 1 = r$$

to find $\sqrt[n]{\frac{FV}{PV}}$
15 times, -1,
÷ n, +1, x = 15 times

PVAF / PVIF

In calculator
 $PVAF = \frac{1}{(1+i)^n}$ K pres GT

$$\frac{1}{r} \left(1 - \frac{1}{(1+r)^n}\right)$$

also written as
 $\frac{(1+i)^n - 1}{i(1+i)^n}$

$$\frac{1}{r} \left(1 - \frac{1}{(1+r)^n}\right) (1+r)$$

Calculate Annuity for (n-1) annuities & add 1 to it.

AF for Total 5y (-) = 2y
AF for 3y

Yr	PVF
3	PVF respective yrs
4	

FVAF / FVIF

Do Normal calculation Don't press GT

$$\frac{(1+r)^n - 1}{r} \rightarrow \frac{1}{r} = 0.0001$$

Calculate Only using formula not possible to use calculator

Yr	PVF
1	0.0001
2	0.0001
3	0.0001
4	1

because End

Yr	AF
0	1
1	0.0001
2	0.0001
3	0.0001
4	0.0001

AF for 4 years & add 1

Some important Definitions:

Simple Interest: Interest calculated on original principal Amount

Compound Interest: " " Total of previously earned int. & original principal

Sinking Fund: If the fund created for a specified purpose by way of sequence of periodic payments over a time period at a specified rate of interest

Perpetuity: It is a Annuity in which the periodic payments (or) receipts begin on a fixed date & continues indefinitely (or) Perpetually $\Rightarrow$ Irredeemable pref. shares.

Annuity: An annuity is a stream of regular periodic payments / receipts for a specific period of time. In an ordinary annuity, payments / receipts occur at the end of each period.

Reason why money can be more valuable today than in future:

- i. preference for present consumption: preference for present than future consumption
- ii. Inflation Inflation means when prices of things rises faster than they actually should. When there is a inflation, the value of currency decreases overtime
- iii. Risk Risk of uncertainty in future lowers the value of money

Presentation for EMI / Installments / Amortisation - Question

Year	opening Balance	payment	principal	Interest	Balance outstanding
	previous closing b/s	$EMI = \frac{loan}{AF_2}$ $\frac{1}{(1+i)^T} = 9T$ (Same for all yrs)		Int. on op. Balance	opening (-) payment closing

knock the 'T' of the CAN'T say iCan.....

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FEED BACK :

**FOR ANY NEW FILES / CLARIFICATIONS / SUGGESTIONS /ANY
QUEIRES..**

FEEL FREE TO CONTACT :

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