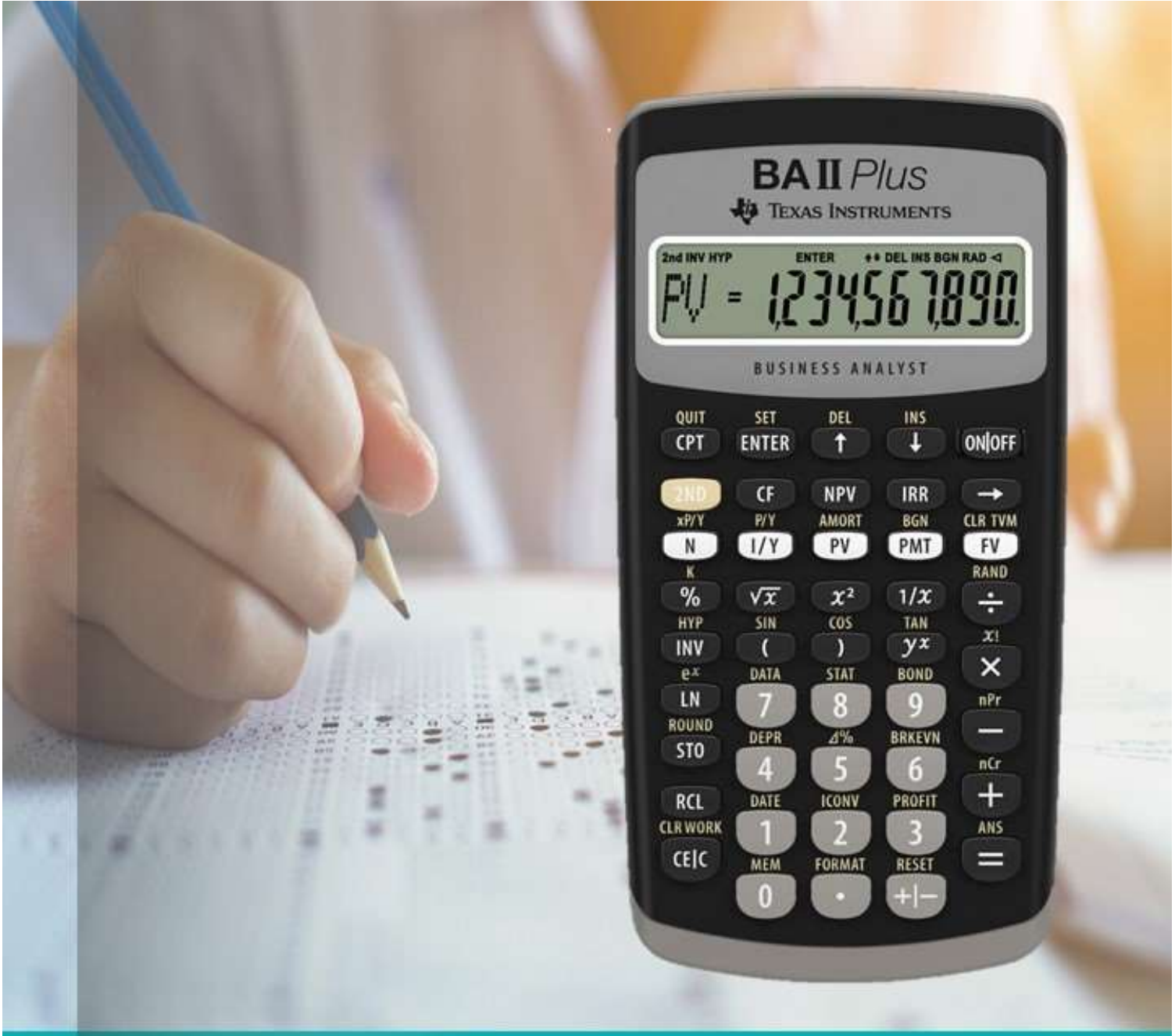

TI BA II Plus calculator Guide + Workbook + Video

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TI BA II PLUS CALCULATOR MANUAL FOR FRM AND CFA

1.1 TURING ON THE CALCULATOR

Press ON OFF button

Calculator comes with APD automatic power down feature, which turns off the calculator after 5 min. If calculator is APD off, then calculations and data is not lost. Simply press on and you can resume work.

1.2 SECOND FUNCTION

Press 2 nd key to get calculator into second function. Second functions are functions available on button (written above every button).

To cancel 2 nd just press same key again.

1.3 SETTING CALCULATOR FORMATS

CHANGING DECIMALS –

press 2^{nd} > Format . You will see Dec on display. Press number key to set decimal. To set calculator to 9 decimals use following

2^{nd} > Format > 9 > Enter

CHANGING NUMBER SEPARATOR FOR CURRENCY

2^{nd} > Format > Press down button 3 times > 2^{nd} Set > will change US to Euro

US 1,000.00

Euro 1.000,00

2.1 TIME VALUE OF MONEY

Used for present value, future value, PMT or I/Y calculation.

CALCULATION 1: CALCULATE PRESENT VALUE.

Assuming Annual	**Semi Annual**	**Quarterly**
PMT = 100 **I/Y = periodic Yield = 15%** **FV = 1000** **N = 10 Period**	PMT = 50 I/Y = 7.5% FV = 1000 N = 20 Period	PMT = 25 I/Y = 3.75% FV = 1000 N = 40 Period
Entering Values **100 > PMT** **15> I/Y** **1000 > FV** **10 > N** **CPT > PV > - 749.06**	Entering Values 50> PMT 7.5> I/Y 1000 > FV 20> N CPT > PV > - 745.13	Entering Values 25> PMT 3.75> I/Y 1000 > FV 40> N CPT > PV > - 743.11

CALCULATION OF I/Y – YIELD CALCULATION

Assuming Annual	**Semi Annual**	**Quarterly**
PMT = 100 **FV = 1000** **N = 10 Period** **PV =- 780**	PMT = 50 FV = 1000 N = 20 Period PV = -780	PMT = 25 FV = 1000 N = 40 Period PV = -780
Entering Values **100 > PMT** **1000 > FV** **10 > N** **780 > PV** **CPT > I/Y = 14.26% / Period**	Entering Values 50> PMT 1000 > FV 20> N 780 > PV CPT > I/Y = 7.09% / Period	Entering Values 25> PMT 1000 > FV 40> N 780 > PV CPT > I/Y = 3.53%/ Period

I/Y is periodic. Hence, we need to multiply it with number of periods in a year to get rate with periodic compounding.

2.2 INTEREST RATE COMPOUNDING PERIOD MANIPULATION

Statement	Meaning	CC Conversion (A)	Yearly effective rate conversion
12% Annual rate	Meaning 12% paid annually	0.12 > +1 > Ln > X 1 >	NA
12% Semiannual rate	6% Paid in every six months	0.12/2 > +1 > Ln > X 2 >	A > 2nd Ln > -1>
12% Quarterly rate	4% Paid in every quarter	0.12/4 > + 1 > Ln > X 4 >	A > 2nd Ln > -1>
12% Monthly rate	1% Paid monthly	0.12 /12 > +1 > Ln > X 12	A > 2nd Ln > -1>
12% Continuously compounded rate.	Paid on momentarily basis. Can not be used directly in any calculation.	NA	0.12 > 2nd Ln > -1 >

3.1 STATISTICS: PERMUTATION COMBINATION AND BINOMIAL DISTRIBUTION

PERMUTATION AND COMBINATION

Permutation: Total number of ways to select from set when order matters.

Formula: P(n,r) = n! / (n-r)!

Example: Find out total number of ways to award 3 medals (Gold, silver and Bronze) to 20 players.

Calculator: 20 > 2nd nPr > 3 > = > 6840

Combination: Total number of ways to select from the set when order doesn't matter.

Formula: C(n,r) = n! / r! * (n-r)!

Example: Find out total number of ways to gift 3 to 20 kids.

Calculator: 20 > 2^{nd} nCr > 3 = > 1140

BINOMIAL DISTRIBUTION

Class Illustration:

Probability of selecting a red ball from the sac of 10 random balls is 0.20. What is the probability of getting 4 Red balls in random draw.

N= 10 , x = 4 and probability of success is 0.20.

nCr X p ^ x X (1-p) ^ (n-x).

10C4 X 0.20 ^ 4 X (1-0.20) ^ (10-4)

HOMEWORK:

Currently 20 associates are working in a risk management team our of which 5 are FRM. CRO wants to form a committee of 6 with 2 FRMs. What is the probability of CRO is able to form a committee as per the requirement if members are randomly selected?

3.2 BASIC STATISTICS AND PROBABILITY (WATCH VIDEO)

BASIC STATISTICS ONE VARIABLE

X = 12, 15, -19, 5, -8

Using calculator, you can calculate: mean, population standard deviation, sample standard deviation.

BASIC STATISTICS ONE VARIABLE AND PROBABILITY (1-V)

X	Prob
12	0.20
15	0.30
-19	0.10
-8	0.40

Using calculator, you can calculate mean, population standard deviation, sample standard deviation.

Note: Always enter probability in % form in Y value. Like 20 for 0.20. and Set calculator to 1V function.

CORRELATION AND LINEAR REGRESSION USING TWO VARIABLES

X	Y
12	55
15	65
-19	-70
-8	80

Using calculator, you can calculate mean, population standard deviation, sample standard deviation for both variables and correlation. It also provides intercept and slope for linear regression.

TIPS AND TRICKS

SUGGESTIONS

- Try and practice limited number of functions.
- If one task can be done using two or more functions then decide one function for the task to avoid confusion.
- Revise all functions before exam, even small mistake in entering data can cause trouble.

TIME SAVING TRICK STORE AND BRACKETS

For the complex calculations prefer store and bracket function.