

Using the TI-BA II calculator for financial calculations

© Steve Bollweg, Joseph Crisolago and Michael D. Kinsman

This is a brief guide to using the TI BA II financial calculator. It does not replace your instruction booklet, nor does it replace actually practicing with the calculator. In the materials below, **BOLD FACE** indicates that you press a key with that label on your TI BA II. **#** below indicates that you press a number key on your TI BA II. **2nd** indicates that you press the gray shift key that accesses the secondary functions of the keys.

Setting up your calculator. To set the number of digits after the decimal point, press **2nd Format # ENTER** where # is the number of digits you want to display after the decimal point.

Financial calculations. To set your calculator for beginning of period mode, press **2nd BGN**. Then, entering **2nd SET** will toggle between begin and end mode. To enter the number of periods in a year press **2nd P/Y**, enter # (the number of periods in a year), and press **ENTER** (for example, enter **2nd P/Y 12 ENTER** for monthly).

You should use the following sign convention when you work on financial calculations:

- Treat cash flows you are receiving as positive numbers.
- Treat cash flows you are paying out as negative numbers.

To turn a positive number into a negative number, enter the number on your keypad and press +/-.

For the calculations below, you must first clear your calculator by entering **2nd QUIT 2nd CLR TVM**. In each of these calculations, remember the sign convention! If you have an error, either that or omitted data is the most likely cause.

To calculate	First clear	Next enter	Next enter	Next enter	Next enter	Push for result
Future value	See above	# N	# I/Y	# PMT (if any). Annuity payments	# PV (if any). Single payments now	CPT FV
Present value	See above	# N	# I/Y	# PMT (if any). Annuity payments	# FV (if any). Single payments at time N	CPT PV
Interest rate	See above	# N	# PMT (if any). Annuity payments	# PV (if any). Single payments now	# FV (if any). Single payments at time N	CPT I/Y
Annuity payment	See above	# N	# I/Y	# PV (if any). Single payments now	# FV (if any). Single payments at time N	CPT PMT

To amortize a loan. Do the steps for annuity payment as shown above. Press **2nd Amort**. Clear the worksheet by pressing **2nd CLR Work**. The up and down arrows allow you to scroll through the variables easily. The display $P1 = \#$ is the first period you want to amortize, and the display $P2 = \#$ (displayed by pressing the down arrow) is the end of the period you want to amortize. For example, to do periods 1 to 5, press **1 ENTER** at $P1 = \#$, then scroll down to $P2 = \#$ and press **5 ENTER**. Then,

- To display the remaining balance of the loan, press the down arrow.
- To display the amount of principal you paid in this interval, press the down arrow again.
- To display the amount of interest you paid in this interval, press the down arrow again.

To do subsequent period amortizations, enter new values for P1 and P2 and follow the steps listed above.

To calculate IRR and NPV.

- Press **CF** to access the cash flow worksheet.
- Clear previous data by pressing **2nd CLR Work**.
- In entering your data, remember that CF_0 is the flow at period zero; $C01$ is the first flow after time zero; $C02$ is the second flow after time zero, etc.
- To enter each flow, press **# ENTER**. If the cash flow is repeated, enter **# ENTER** when the $F0n$ variable is shown on the display. (For example, if you have three \$100 flows in a row, press **100 ENTER 3 ENTER**).
- Press the down arrow key to get to the next cash flow.
- After you have entered all the cash flows:
 - To calculate an NPV, press **NPV**, enter the interest rate (**# ENTER**), scroll down using the down arrow key to display NPV, and press **CPT**.
 - To calculate an IRR, press **IRR** and press **CPT**.