

Using the HP-12c calculator for financial calculations

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This is a brief guide to using the HP-12c 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 HP-12c. **#** below indicates that you press a number key on your HP-12c. **g** below indicates that you press the blue key; and **f** below indicates you enter the yellow-orange key.

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

Financial calculations. To do any calculation in finance using beginning of period payments, press **g7**. That will light the "begin" sign in your window. To get end of period payments, press **g8**. That will turn off the begin sign in your window.

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 **CHS**.

For the calculations below, remember the sign convention! If you have an error, either that or omitted data is the most likely cause. Remember that the interest rate must be consistent with the number of periods. If you have 12 percent annual interest, and are using 12 periods per year, you would enter 1 into **i** (or you could enter **12g i**).

To calculate	First clear	Next enter	Next enter	Next enter	Next enter	Press for result
Future value	fX<>Y and fCLX	# n	# i	#PMT (if any). Annuity payments	#PV (if any). Single payments now	FV
Present value	fX<>Y and fCLX	# n	# i	#PMT (if any). Annuity payments	#FV (if any). Single payments at time n	PV
Interest rate	fX<>Y and fCLX	# n	#PV (if any). Single payments now	#PMT (if any). Annuity payments	#FV (if any). Single payments at time n	i
Annuity payment	fX<>Y and fCLX	# n	# i	#PV (if any). Single payments now	#FV (if any). Single payments at time n	PMT

To amortize a loan. Do the steps for annuity payment as shown above. Then enter **0 n**. Then enter **#** (the number of periods you want to amortize) followed by **fn [amort]**. For example, to calculate interest and principal paid for the first five periods of a loan, enter **5 amort**:

- The amount of interest paid for the interval you amortized is shown on the screen.
- To show the amount of principal paid for the interval, press **x><y**.
- To show the remaining balance of the loan, press **RCL PV**.

If you had 12 months of payments on your house loan after the short first interval of 5 payments above, you'd press **12 amort**. The first calculation would amortize 5 months of the loan, and the second calculation would amortize the next 12 months of the loan. Press **# amort** for each subsequent interval you wish to amortize

To calculate IRR and NPV. Enter the cash flows, remembering the sign convention:

- Clear out previous data by pressing **fX<>Y** and **fCLX**.
- To enter the first flow, press **# gPV [# CF₀]**, remembering Flow (0) is the flow at period zero. If this flow is zero, go to the next step.
- To enter subsequent cash flows, enter **# gPMT [# CF_j]**. If a cash flow is repeated, enter **#gFV [#N_j]** for the total number of times it is repeated in a row (including the one you just entered.)
- After you have entered all the flows,
 - If you are calculating an NPV, enter your interest rate **# i** followed by **fPV [NPV]**.
 - If you are calculating an IRR, enter **fFV [IRR]**.