

# HP-12C Platinum Basics

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**Operation:** The HP-12C Platinum (HP12CP) works just like any other 4-level RPN calculator when in RPN mode. In ALG mode, ENTER works as an equals key, there is no operator precedence - the parentheses keys must be used to make multiplication occur before addition, and the 4-level stack is a history stack of previous results.

The HP12CP starts with 20 data memories and 309 program lines. As you go beyond 309 program lines, data memories are converted to program line space at the rate of 1 memory = 7 program lines. The maximum number of program lines is 399.  $\boxed{f}$   $\boxed{ALG}$  sets algebraic mode and  $\boxed{f}$   $\boxed{RPN}$  sets RPN mode. Memories are 0-9 and .0 through .9 (e.g.,  $\boxed{CLx}$   $\boxed{STO}$   $\boxed{\cdot}$  0). Storage register arithmetic is only valid on memories 0 through 4. Undo for accidental clearing of display or memories is  $\boxed{g}$   $\boxed{\div}$ . Manual mode backspace is  $\boxed{g}$   $\boxed{-}$ . Fix 2 is  $\boxed{f}$  2, Fix 4 is  $\boxed{f}$  4, etc. Scientific notation is  $\boxed{f}$   $\boxed{\cdot}$ .

**Programming:** The HP12CP uses absolute line number addressing, not labels. If you need to edit your program, you'll have to change all GTO instructions to point at any changed line numbers. There is also no backspace key in program mode and no way to delete a program line other than by typing over the wrong program step ( $\boxed{f}$   $\boxed{RPN}$  might be a good NOP). There are two conditional tests,  $x=0?$  and  $x<=y?$ . There are no subroutines.

**Financial operations:** The HP12CP operates on a per period interest rate basis. Values for the interest rate are always entered "per period." For example, if you are computing a house payment and your interest rate is 6% with monthly payments, the interest rate is entered as 6  $\boxed{ENTER}$  12  $\boxed{\div}$ . The HP12CP follows the cash flow sign convention, which means that money coming in is represented as a positive number and money going out is represented as a negative number. Calculations for "n" are almost always rounded up (see footnote, page 50 owners manual).

## Financial examples:

1 ) If you deposit \$1,000 today into an account paying 5.5%, compounded monthly, how much will be in the account in 10 years?

$\boxed{f}$ $\boxed{FIN}$	Clears the financial registers
10 $\boxed{g}$ $\boxed{12x}$	Multiplies 10 by 12 and stores the result as "n"
6 $\boxed{g}$ $\boxed{12\div}$	Divides 6 by 12 and stores the result as the periodic interest rate in "i"
1000 $\boxed{PV}$	Entered as a positive number since it is cash going into the account
$\boxed{FV}$	Computes the value in the future and displays the answer. Shown as a negative number since it is money coming out of the account. Answer is -1,819.40

2 ) If I can afford a \$495 payment on a new car costing \$25,000 and I will make payments for 60 months, what is the maximum interest rate I could pay?

$\boxed{f}$ $\boxed{FIN}$	Clears the financial registers
60 $\boxed{n}$	Enters 60 as "n"
25000 $\boxed{PV}$	Entered as a positive number since it is value I am receiving (the car)
495 $\boxed{CHS}$ $\boxed{PMT}$	Entered as a negative number since it is a monthly amount I pay out
$\boxed{i}$	Computes the interest rate per month. Answer is 0.26 per month. To see the interest rate the way we are used to seeing it, multiply by 12. Answer is 7%, compounded monthly.

## Statistics example:

1 ) What is the slope and y-intercept of the line going through (1,4) and (3,7)?

$\boxed{f}$ $\boxed{REG}$	Clears the memory registers
4 $\boxed{ENTER}$ 1 $\boxed{\Sigma+}$	Key in first data point as y ENTER x.
7 $\boxed{ENTER}$ 3 $\boxed{\Sigma+}$	Key in second data point as y ENTER x.
$\boxed{CLx}$ $\boxed{g}$ $\boxed{\hat{y},r}$	Estimates y when x is zero. This is the y-intercept, 2.5
1 $\boxed{g}$ $\boxed{\hat{y},r}$	Estimates y when x is one.
$\boxed{\times\div y}$ $\boxed{R\downarrow}$ $\boxed{\times\div y}$ $\boxed{-}$	Computes difference in y between $x=0$ and $x=1$ . This is the slope, 1.5

**Fun things:** Appendix B of the HP12CP Owners Manual deals with algebraic mode. Be sure to enjoy the write-up for the operation of the LastX function in algebraic mode on page 239.

