

Changing Cash Flow Entries:

To change a CF_j value, key in the new number and press **STO** j or **STO** . j to store new value in R_j or $R_{.j}$.

To change the j^{th} N_j value, press **j** **n** new number **9** **N_j**.

Remember to reset **n** to the number of CF_j entries (excluding CF_0), after you review or change cash flows.

PROGRAMMING THE HP-38E

In *program* mode, only the following functions are active and cannot be recorded:

9 P/R, **9 GTO** .00 through .99, **9 SST**, **9 BST**, **9 CLP**, and **9 MEM**.

9 GTO .00 through .99 sets calculator to that line of program memory. When a *decimal point* is pressed before the line number is specified, the **GTO** instruction is not recorded.

9 CLP clears program memory to all **9 GTO** 00 instructions, sets calculator to line 00, and relocates 20 storage registers and eight program lines to calculator memory.

9 MEM specifies number of program lines (P-) and number of storage registers (r-) available within current memory allocation.

x<y **x=0** Conditionals. Tests value in X-register against value in Y-register or 0 as

indicated. If true, calculator executes instruction in next line of program memory. If false, calculator skips one line before resuming execution.

ERROR MESSAGES

Error 0: Improper operation involving zero.

Error 1: Storage register overflow.

Error 2: Improper data in statistical registers.

Error 3: Amortization; wrong input to X-register, or IRR; input best guess, press **RCL** **9 R/S**.

Error 4: Improper memory address.

Error 5: Compound interest; bad input.

Error 6: Discounted cash flow analysis; improper input.

Error 7: IRR; no solution exists.

Error 8: Calendar; improper input.

Error 9: Failed self-check (**STO** **ENTER+**).

Pr Error: Continuous Memory cleared by power failure. (HP-38C only).



HP-38E/38C Quick Reference Card

THE MEMORY

Automatic Memory Stack

T	0.00
Z	0.00
Y	0.00
X	0.00

Top

LAST X	0.00
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Always displayed

Financial Registers

n	i	PV	PMT	FV

Storage Registers

R₀	R_{.0}	00	09
R₁	n	01	10
R₂	Σx	02	11
R₃	Σx^2	03	.
R₄	Σy	04	.
R₅	Σy^2	05	.
R₆	Σxy	06	97
R₇		07	98
R₈		08	99
R₉			

Program Memory

The calculator automatically converts one storage register into seven lines of programming, one at a time as you need them, beginning with R_9 and ending with R_7 .

STO j or **STO** $.j$ stores x value in R_j or $R_{.j}$.

RCL j or **RCL** $.j$ recalls value from R_j or $R_{.j}$.

STO $+ j$, **STO** $- j$, **STO** $\times j$, **STO** $\div j$: x value is added to, subtracted from, multiplied by, or divided into the contents of R_j , and the result is placed in R_j . Storage registers R_0 through R_6 are reserved for storage register arithmetic.

f **CLEAR** **ALL** clears all registers to 0.00. Leaves program memory unchanged.

SUMMATIONS

f **CLEAR** **E** clears statistical registers R_1 through R_6 to 0.00.

f **E** stores accumulations of numbers in the X- and Y-registers in storage registers R_1 through R_6 .

g **E** subtracts same entries from accumulations.

FINANCIAL INTEREST CALCULATIONS

f **CLEAR** **FIN** clears financial registers to 0.00.

RCL followed by a financial key (**n**, **i**, **PV**, **PMT**, **FV**) recalls that value into the display.

Rules to Remember:

- Given four of the financial values, you can solve for the fifth. Unspecified values maintain a value of zero or last value entered after clearing. Remember, **n** and **i** must correspond to the same time frame.
- The cash flow sign convention: Cash received is positive, cash paid out is negative.*
- Whenever payments **PMT** are involved, be sure to set the payment switch

D.MY  M.DY
BEGIN  END

SIMPLE INTEREST

Store number of days in **n**, annual interest rate in **i**, and principal in **PV**. Pressing **f** **INT** returns:

- INT₃₆₀ to X-register.
- Principal to Y-register; press **x_Y**.
- INT₃₆₅ to Z-register; press **g** **R+** **x_Y**.

AMORTIZATION

Input **i**, **PV**, and **PMT**. Then key in number of periods to be amortized and press **f** **AMORT**. Returns:

- Accumulated interest to X-register.
- Principal portion of payments to Y-register; press **x_Y**.
- Remaining balance to **PV** register.
- Number of periods amortized to **n** register.

DISCOUNTED CASH FLOW ANALYSIS

g **CF₀** stores initial investment in R_0 and sets **n** register to zero.

g **CF_i** stores CF_1 thru CF_9 in R_1 thru R_9 , CF_{10} thru CF_{19} in R_{10} thru R_{19} . Increments **n** by one.

g **N_j** stores number of times (up to 99) each cash flow occurs.

Reviewing Cash Flows:

- Individual cash flows.
 - RCL** **g** **CF_i** recalls CF_j entries in opposite order.
 - RCL** j or **RCL** $.j$ recalls cash flow stored in R_j or $R_{.j}$.
- Groups of cash flows.
 - RCL** **g** **N_j** **RCL** **g** **CF_i** recalls entries in opposite order.
 - j** **n** **RCL** **g** **CF_i** recalls the j^{th} cash flow.
 - j** **n** **RCL** **g** **N_j** recalls the j^{th} N_j value.

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