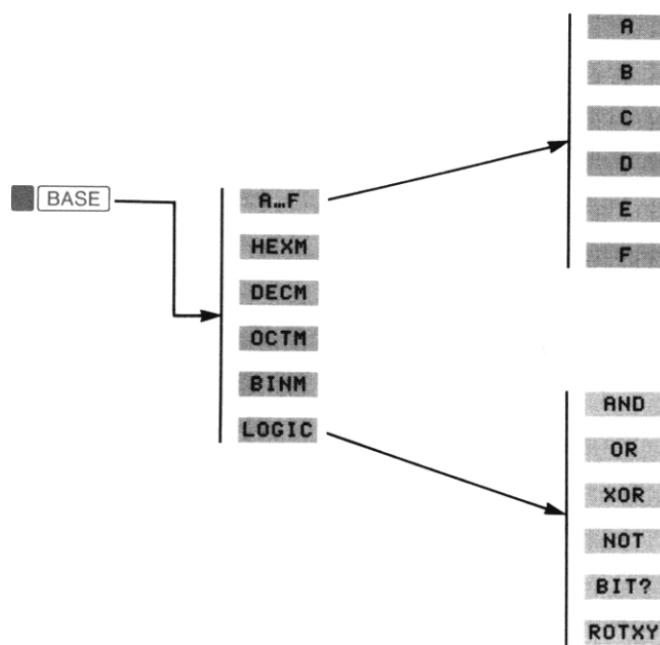
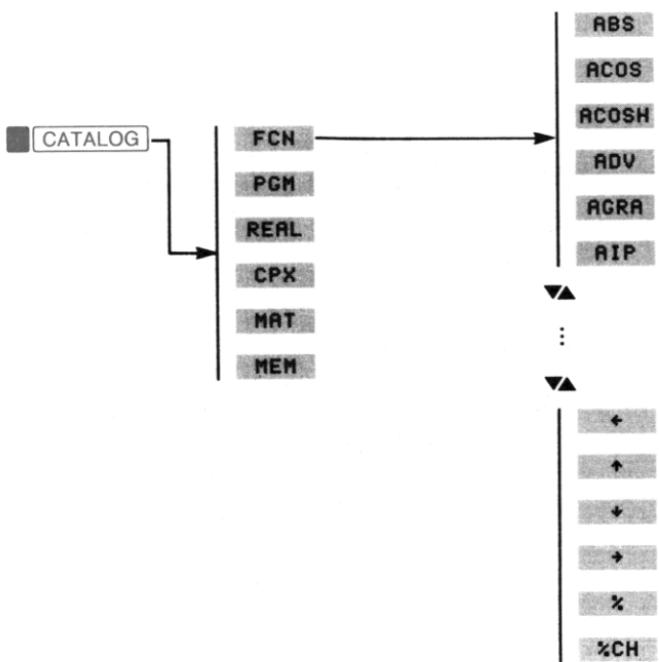


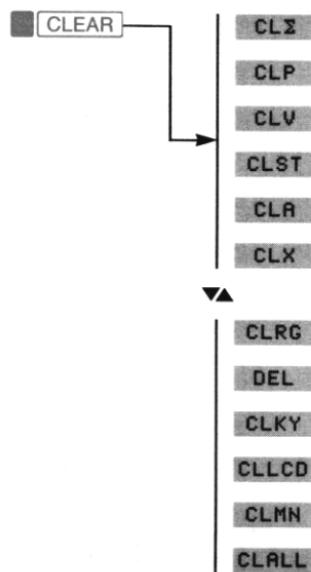
The BASE Menu



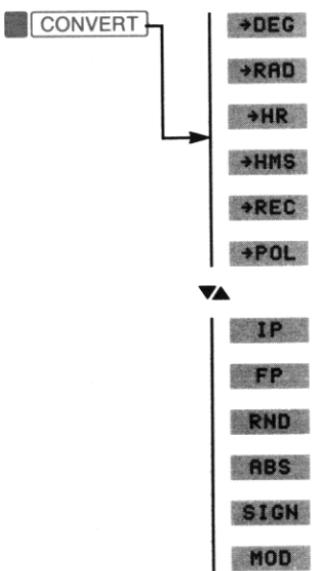
The CATALOG Menu



The CLEAR Menu

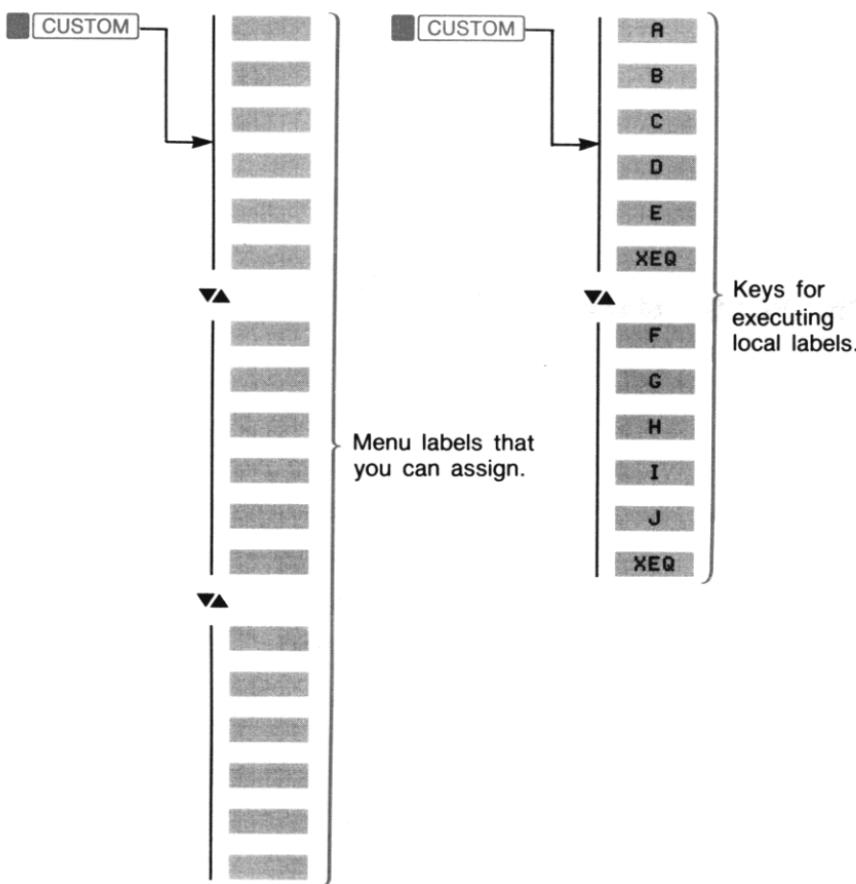


The CONVERT Menu

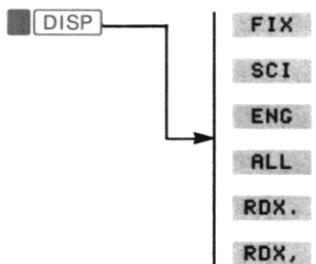


The CUSTOM Menu

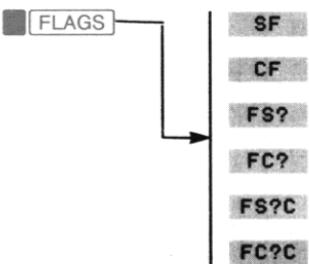
In Key-Assignments Mode In Local-Label Mode



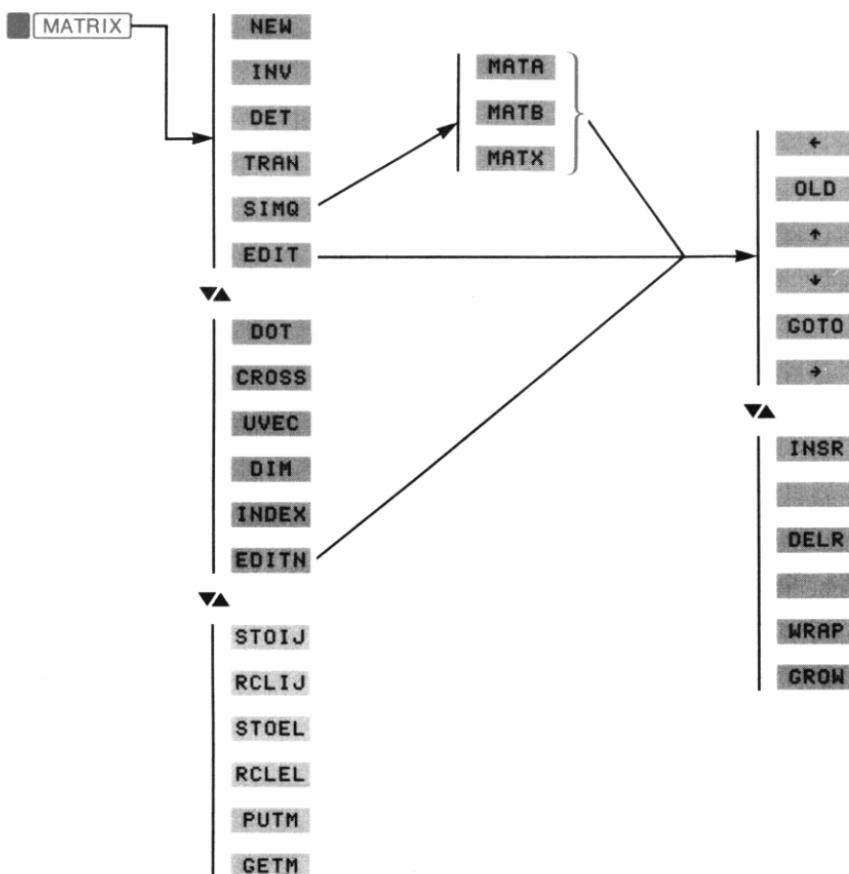
The DISP Menu



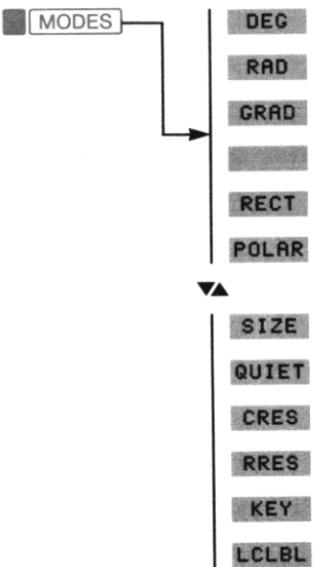
The FLAGS Menu



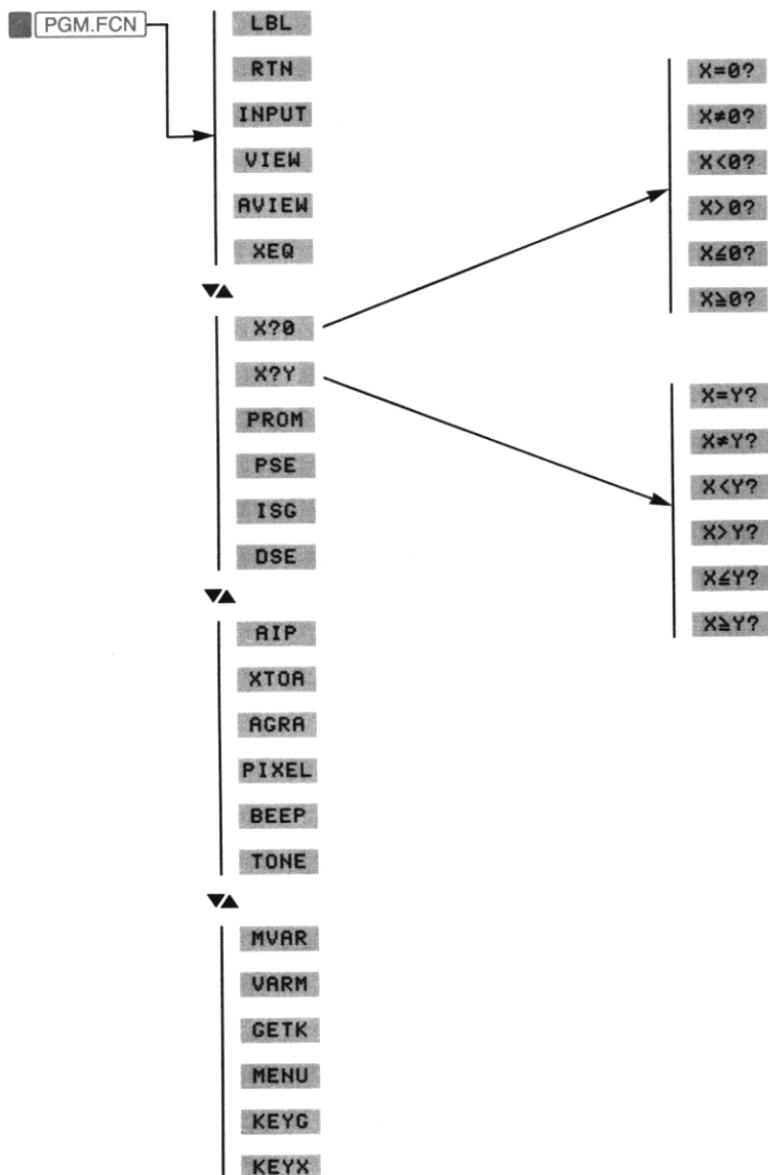
The MATRIX Menu



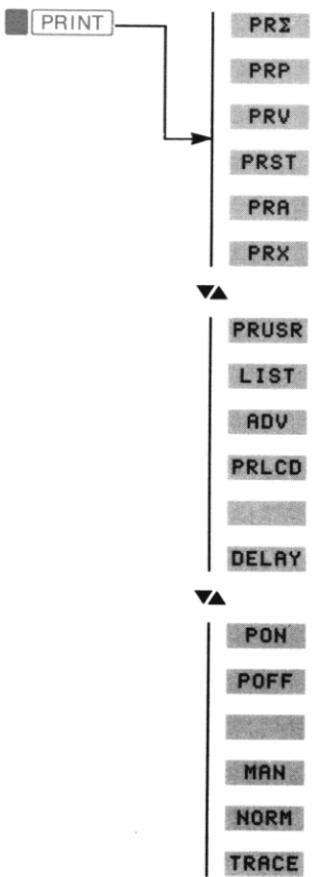
The MODES Menu



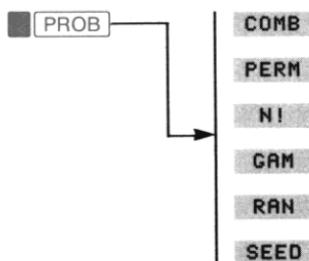
The PGM.FCN Menu



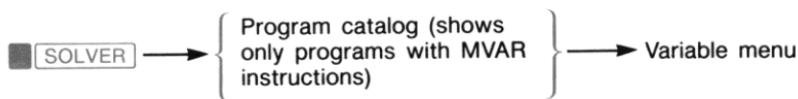
The PRINT Menu



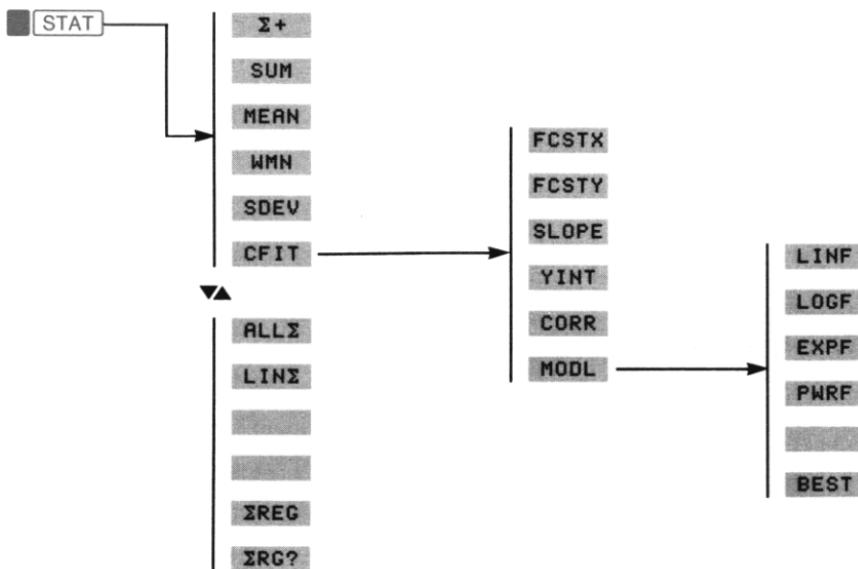
The PROB Menu



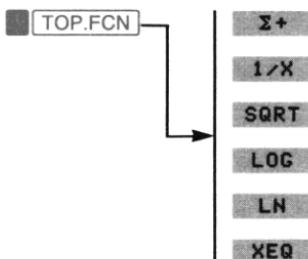
The SOLVER Menu



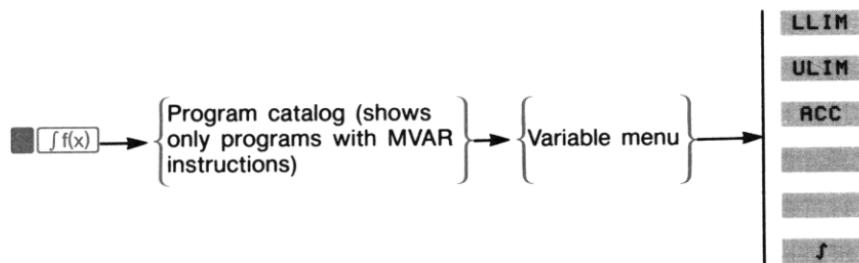
The STAT Menu



The TOP.FCN Menu



The $\int f(x)$ Menu



Operation Index

This index contains basic information and references for all HP-42S functions and keys.

Function Names. The entries in this index are listed alphabetically (with special characters at the end). This is the same order used in the function catalog.

Note that this index uses the *full Alpha name* for each function. Because menu labels are limited to five characters (or fewer), some function names are abbreviated when they appear in a menu label.

Keystrokes. Keystrokes are included for functions that are on the keyboard or in menus. If no keystrokes are shown for a particular function, use the function catalog (► CATALOG ► FCN) or XEQ to execute the function (page 67).

Parameters. Parameters are described for those functions that require a parameter. The entry also indicates if the parameter can be specified using indirect addressing.

Name	Description, Keys, and Parameters	Page
ABS	<i>Absolute value.</i> Returns $ x $. Keys: ► CONVERT ▼ ABS	86
ACOS	<i>Arc cosine.</i> Returns $\cos^{-1} x$. Keys: ► ACOS	82
ACOSH	<i>Arc hyperbolic cosine.</i> Returns $\cosh^{-1} x$.	89
ADV	<i>Advances the printer paper one line.</i> Keys: ► PRINT ▼ RDV	101

Name	Description, Keys, and Parameters	Page
AGRAPH	<i>Alpha graphics.</i> Displays a graphics image. Each character in the Alpha register specifies an 8-dot column pattern. The X- and Y-registers specify the pixel location of the image. Keys: PGM.FCN ▼ ▼ AGRA	136
AIP	<i>Appends integer part of x to the Alpha register.</i> Keys: PGM.FCN ▼ ▼ AIP	133
ALENG	<i>Alpha length.</i> Returns the number of characters in the Alpha register.	135
ALL	Selects the <i>All</i> display format. Keys: DISP ALL	36
ALLΣ	Selects <i>AllΣ (All-statistics)</i> mode, which uses 13 summation coefficients. Keys: STAT ▼ ALLΣ	233
ALPHA	Selects the ALPHA menu for typing characters.	37
AND	Logical <i>AND</i> . Returns x AND y. Keys: BASE LOGIC AND	250
AOFF	<i>Alpha off.</i> Exits from the ALPHA menu.	157
AON	<i>Alpha on.</i> Selects the ALPHA menu.	156
ARCL	<i>Alpha recall.</i> Copies data into the Alpha register appending it to the current contents. Numbers are formatted using the current display format. Key: RCL (when Alpha mode is on) Parameter: register or variable Indirect: Yes	133
AROT	<i>Alpha rotate.</i> Rotates the Alpha register by the number of characters specified in the X-register.	135
ASHF	<i>Alpha shift.</i> Shifts the six left-most characters out of the Alpha register.	135
ASIN	<i>Arc sine.</i> Returns $\sin^{-1} x$. Keys: ASIN	82

Name	Description, Keys, and Parameters	Page
ASINH	Arc hyperbolic sine. Returns $\sinh^{-1} x$.	89
ASSIGN	Assigns a function, program, or variable to a menu key in the CUSTOM menu. Keys: ASSIGN Parameters: refer to the table on page 72.	68
ASTO	Alpha store. Copies the first six characters in the Alpha register into a register or variable. Key: STO (when Alpha mode is on) Parameter: register or variable Indirect: Yes	132
ATAN	Arc tangent. Returns $\tan^{-1} x$. Keys: ATAN	82
ATANH	Arc hyperbolic tangent. Returns $\tanh^{-1} x$.	89
ATOX	Alpha to X. Converts the left-most character in the Alpha register to its character code (returned to the X-register) and deletes the character.	134
AVIEW	Alpha view. Displays the Alpha register. Keys: PGM.FCN AVIEW	129
BASE	Selects the BASE menu.	245
BASE +	Base addition. Returns the 36-bit sum of $y + x$. Key: BASE +	249
BASE -	Base subtraction. Returns the 36-bit difference of $y - x$. Key: BASE -	249
BASE ×	Base multiplication. Returns the 36-bit product of $y \times x$. Key: BASE ×	249
BASE ÷	Base division. Returns the 36-bit quotient of $y \div x$. Key: BASE +	249

Name	Description, Keys, and Parameters	Page
BASE+/-	<i>Base change sign.</i> Returns the 36-bit 2's complement of x. Key: BASE +/-	249
BEEP	Sounds a sequence of four tones. Keys: PGM.FCN BEEP	24
BEST	Selects the <i>best</i> curve-fitting model for the current statistical data. Keys: STAT CFIT MODL BEST	240
BINM	Selects <i>Binary mode</i> (base 2). Keys: BASE BINM	245
BIT?	Tests the x^{th} bit of y. If the bit is set (1), executes the next program line; if the bit is clear (0), skips the next program line. Keys: BASE LOGIC BIT?	250
BST	<i>Back step.</i> Moves the program pointer to the previous program line. (Not programmable.) Keys: BST (or if no menu is displayed)	111
CF	<i>Clears flag nn</i> ($00 \leq nn \leq 35$; $81 \leq nn \leq 99$). Keys: FLAGS CF Parameter: flag number Indirect: Yes	41
CATALOG	Selects the CATALOG menu.	40
CLA	<i>Clears Alpha register.</i> If Alpha mode is on and character entry is terminated (no cursor displayed), then also executes the CLA function. Keys: CLEAR CLA	26
CLALL	<i>Clear all.</i> Clears all stored programs and data. (Not Programmable.) Keys: CLEAR CLALL YES	26
CLD	<i>Clear display.</i> Clears a message from the display.	26
CLEAR	Selects the CLEAR menu.	26

Name	Description, Keys, and Parameters	Page
CLKEYS	Clears all CUSTOM menu assignments. Keys: [CLEAR] CLKY	70
CLLCD	<i>Clear LCD (liquid crystal display).</i> Blanks the entire display. Keys: [CLEAR] CLLCD	136
CLMENU	<i>Clear MENU.</i> Deletes all menu key definitions for the programmable menu. Keys: [CLEAR] CLMN	146
CLP	Clears a program from memory. Keys: [CLEAR] CLP Parameter: global label Indirect: No	119
CLRG	Clears all of the numbered storage registers to zero. Keys: [CLEAR] CLRG	64
CLST	Clears the stack registers to zero. Keys: [CLEAR] CLST	43
CLV	Clears a variable from memory. Keys: [CLEAR] CLV Parameter: variable name Indirect: Yes	62
CLX	Clears X-register to zero. If digit entry is terminated (no cursor in the display), also executes CLX. Keys: [CLEAR] CLX	48
CLΣ	<i>Clear statistics.</i> Clears the accumulated statistical data in the summation registers. Keys: [CLEAR] CLΣ	228
COMB	<i>Combinations</i> of y items taken x at a time. Returns $y! \div (x!(y - x)!)$. Keys: [PROB] COMB	87

Name	Description, Keys, and Parameters	Page
COMPLEX	Converts two real numbers (or matrices) into a complex number (or matrix). Converts a complex number (or matrix) into two real numbers (or matrices). Keys: COMPLEX	91
CONVERT	Selects the CONVERT menu.	82
CORR	Returns a <i>correlation coefficient</i> using the current statistical data and curve-fitting model. Keys: STAT CFIT CORR	240
COS	<i>Cosine</i> . Returns cos x. Key: COS	81
COSH	<i>Hyperbolic cosine</i> . Returns cosh x.	89
CPXRES	<i>Complex-results</i> . Enables the calculator to return a complex result, even if the inputs are real numbers. Keys: MODES ▼ CRES	94
CPX?	If the X-register contains a complex number, executes the next program line; if the X-register does not contain a complex number, skips the next program line.	151
CROSS	Returns the <i>cross product</i> of two vectors (matrices or complex numbers). Keys: MATRIX ▼ CROSS	220
CUSTOM	Selects the CUSTOM menu.	68
DECM	Selects <i>Decimal mode</i> (base 10). Keys: BASE DECM	245
DEG	Selects the <i>Degrees</i> angular mode. Keys: MODES DEG	80

Name	Description, Keys, and Parameters	Page
DEL	<i>Deletes</i> the specified number of lines from the current program. Program-entry mode must be on. (Not programmable.) Keys: CLEAR DEL Parameter: number of lines Indirect: No	120
DELAY	Sets the print <i>delay</i> time to <i>x</i> seconds. Keys: PRINT DELAY	103
DELR	<i>Delete row.</i> Deletes the current row from the indexed matrix. Keys: MATRIX EDIT DELR	214
DET	Returns the <i>determinant</i> of the matrix in the X-register. Keys: MATRIX DET	219
DIM	<i>Dimensions</i> a matrix to <i>x</i> columns and <i>y</i> rows. If the matrix does not exist, DIM creates it. Keys: MATRIX DIM Parameter: variable name Indirect: Yes	217
DIM?	Returns the <i>dimensions</i> of the matrix in the X-register (<i>rows</i> to the Y-register and <i>columns</i> to the X-register).	217
DISP	Selects the DISP menu.	34
DOT	Returns the <i>dot product</i> of two vectors (matrices or complex numbers). Keys: MATRIX DOT	220
DSE	<i>Decrement, Skip if (less than or) Equal.</i> Given <i>ccccccc.ffffii</i> in a variable or register, decrements <i>ccccccc</i> by <i>ii</i> and skips the next program line if <i>ccccccc</i> is now \leq <i>fff</i> . Keys: PGM.FCN DSE Parameter: register or variable Indirect: Yes	153
E	<i>Enter exponent.</i> Adds "E" to the number being entered. Indicates that a power of ten follows.	27

Name	Description, Keys, and Parameters	Page
EDIT	Edit a matrix in the X-register. Keys: MATRIX EDIT	206
EDITN	Edit a <i>named</i> matrix. Keys: MATRIX EDITN Parameter: variable name Indirect: Yes	208
END	End of a program.	118
ENG	Selects <i>Engineering</i> display format. Keys: DISP ENG Parameter: number of digits Indirect: Yes	36
ENTER	Separates two numbers keyed in sequentially; copies <i>x</i> into the Y-register, <i>y</i> into the Z-register, and <i>z</i> into the T-register, and loses <i>t</i> . Key: ENTER	46
EXIT	Exits the current menu. (Not programmable.)	23
EXITALL	Exits <i>all</i> menus.	
EXPF	Selects the <i>exponential</i> curve-fitting model.	240
	Keys: STAT CFIT MODL EXPF	
E _t X	<i>Natural exponential</i> . Returns e ^x .	78
	Keys: e^x	
E _t X-1	<i>Natural exponential</i> for values of <i>x</i> which are close to zero. Returns e ^x -1, which provides a much higher accuracy in the fractional part of the result.	
FC?	If the specified flag is clear, executes the next pro- gram line; if the flag is set, skips the next program line. Keys: FLAGS FC? Parameter: flag number Indirect: Yes	41

Name	Description, Keys, and Parameters	Page
FC?C	If the specified flag is clear, executes the next program line; if the flag is set, skips the next program line. Cleared after the test is complete. (This function can be used only with flags 00 through 35 and 81 through 99.) Keys: FLAGS FC?C Parameter: flag number Indirect: Yes	41
FCSTX	Forecasts an <i>x</i> -value given a <i>y</i> -value.	240
	Keys: STAT CFIT FCSTX	
FCSTY	Forecasts a <i>y</i> -value given an <i>x</i> -value.	240
	Keys: STAT CFIT FCSTY	
FIX	Selects Fixed-decimal display format.	35
	Keys: DISP FIX Parameter: number of digits Indirect: Yes	
FLAGS	Selects the FLAGS menu.	41
FNRM	Returns the <i>Frobenius norm</i> of the matrix in the X-register.	219
FP	Returns the <i>fractional part</i> of <i>x</i> .	86
	Keys: CONVERT ▼ FP	
FS?	If the specified flag is set, executes the next program line; if the flag is clear, skips the next program line.	41
	Keys: FLAGS FS? Parameter: flag number Indirect: Yes	
FS?C	If the specified flag is set, executes the next program line; if the flag is clear, skips the next program line. Clears the flag after the test is complete. (This function can be used only with flags 00 through 35 and 81 through 99.)	41
	Keys: FLAGS FS?C Parameter: flag number Indirect: Yes	

Name	Description, Keys, and Parameters	Page
GAMMA	<i>Gamma function.</i> Returns $\Gamma(x)$. Keys: PROB GAM	88
GETKEY	Get key. The calculator waits for you to press a key. When you do, the key number is returned to the X-register. Keys are numbered from 1 through 37 ($\left[\Sigma+\right]$ through $\left[+\right]$) for normal keys and 38 through 74 ($\left[\Sigma-\right]$ through $\left[-\right]$) for shifted keys. Keys: PGM.FCN GETK	
GETM	Get matrix. Copies a submatrix into the X-register from the indexed matrix. Keys: MATRIX GETM	226
GRAD	Selects Grads angular mode. Keys: MODES GRAD	80
GROW	Selects Grow mode. Executing \rightarrow or $J+$ causes the matrix to grow by one new row if the index pointers are at the last (lower-right) element in the matrix. Keys: MATRIX EDIT GROW	213
GTO	Go to label. From the keyboard, moves the program pointer to the specified label. In a running program, causes the program to branch to the specified label. Keys: GTO Parameter: local or global label Indirect: Yes	141
GTO	Moves the program pointer to a line number or global label. (Not programmable.)	111
GTO	Moves the program pointer to a new program space. (Not programmable.)	118
HEXM	Selects Hexadecimal mode (base 16). Keys: BASE HEXM	245

Name	Description, Keys, and Parameters	Page
HMS+	Adds x and y using $H.MMSSss$ (hours-minutes-seconds) format.	84
HMS-	Subtracts x from y using $H.MMSSss$ format.	84
I+	Increments the row pointer in the indexed matrix.	224
I-	Decrements the row pointer in the indexed matrix.	224
INDEX	<i>Indexes</i> a named matrix. Keys: MATRIX INDEX Parameter: variable name Indirect: Yes	223
INPUT	Recalls a register or variable to the X-register, displays the name of the register or variable along with the contents of the X-register, and halts program execution; pressing R/S (or SST) stores x into the register or variable; pressing EXIT cancels. (Used only in programs.) Keys: PGM.FCN INPUT Parameter: register or variable Indirect: Yes	121
INSR	<i>Inserts a row</i> in the indexed matrix. Keys: MATRIX EDIT INSR	214
INTEG	<i>Integrates</i> the selected integration program with respect to the specified variable. Parameter: variable name Indirect: Yes	203
INVRT	Returns the <i>inverse</i> of the matrix in the X-register. Keys: MATRIX INV	219
IP	Returns the <i>integer part</i> of x . Keys: CONVERT IP	86
ISG	<i>Increment, Skip if Greater</i> . Given $ccccccc.fffii$ in a variable or register, increments $ccccccc$ by ii and skips the next program line if $ccccccc$ is now $> fff$. Keys: PGM.FCN ISG Parameter: register or variable Indirect: Yes	153

Name	Description, Keys, and Parameters	Page
J+	Increments the column pointer in the indexed matrix.	224
J-	Decrements the column pointer in the indexed matrix.	224
KEYASN	Selects Key-assignments mode for the CUSTOM menu. Keys: MODES KEY	167
KEYG	On menu key, go to. Defines the label to be branched to when a particular menu key is pressed. Keys: PGM.FCN KEYG Parameters: refer to the table on page 72.	145
KEYX	On menu key, execute. Defines the label to be executed (as a subroutine) when a particular menu key is pressed. Keys: PGM.FCN KEYX Parameters: refer to the table on page 72.	145
LASTX	Last x. Recalls the last value of x used in a calculation. Keys: LASTx	48
LBL	Label. Identifies programs and routines for execution and branching. Keys: PGM.FCN LBL Parameter: local or global label Indirect: No	116
LCLBL	Selects Local label mode for the CUSTOM menu. Keys: MODES LCLBL	167
LINF	Selects the linear curve-fitting model. Keys: STAT CFIT MODL LINF	240
LINΣ	Selects Linear statistics mode, which uses six summation coefficients. Keys: STAT LINΣ	233

Name	Description, Keys, and Parameters	Page
LIST	Prints a portion of a program listing. (Not programmable.) Keys: PRINT LIST Parameter: number of lines Indirect: No	105
LN	Natural logarithm. Returns $\ln x$. Key: LN	78
LN1+X	Natural logarithm for values close to zero. Returns $\ln(1 + x)$, which provides a much higher accuracy in the fractional part of the result.	
LOG	Common logarithm. Returns $\log_{10} x$. Key: LOG	78
LOGF	Selects the logarithmic curve-fitting model. Keys: STAT CFIT MODL LOGF	240
MAN	Selects Manual print mode. Keys: PRINT MAN	102
MAT?	If the X-register contains a matrix, executes the next program line; if the X-register does not contain a matrix, skips the next program line.	151
MEAN	Mean. Returns the mean of x-values ($\Sigma x \div n$) and the mean of y-values ($\Sigma y \div n$). Keys: STAT MEAN	231
MENU	Selects the programmable menu. Keys: PGM.FCN MENU	146
MOD	Modulo. Returns the remainder for $y \div x$. Keys: CONVERT MOD	87
MVAR	Declares a menu variable. Keys: PGM.FCN MVAR Parameter: variable name Indirect: No	125

Name	Description, Keys, and Parameters	Page
N!	<i>Factorial.</i> Returns $x!$. Keys: PROB N!	87
NEWMAT	<i>New matrix.</i> Creates a $y \times x$ matrix in the X-register. Keys: MATRIX NEW	206
NORM	Selects <i>Normal</i> print mode, which prints a record of keystrokes. Keys: PRINT ▲ NORM	102
NOT	Logical <i>NOT</i> . Returns NOT x . Keys: BASE LOGIC NOT	250
OCTM	Selects <i>Octal mode</i> (base 8). Keys: BASE OCTM	245
OFF	Turns the calculator off. (Not programmable.)	18
OFF	Turns the calculator off (programmable). (Pressing OFF does not execute the programmable OFF function.)	
OLD	Recalls the current element from the indexed matrix. (Equivalent to RCLEL.)	213
ON	<i>Continuous on.</i> Prevents the calculator from automatically turning off after ten minutes of inactivity.	
OR	Logical <i>OR</i> . Returns $x \text{ OR } y$. Keys: BASE LOGIC OR	250
PGM.FCN	Selects the PGM.FCN (<i>programming functions</i>) menu.	24
PERM	<i>Permutations</i> of y items taken x at a time. Returns $y! \div (y - x)!$. Keys: PROB PERM	87
PGMINT	Selects a <i>program to integrate</i> . Keys: f(x) PINT (in Program-entry mode) Parameter: global label Indirect: Yes	203

Name	Description, Keys, and Parameters	Page
PGMSLV	Selects a <i>program to solve</i> . Keys: SOLVER PSLV (in Program-entry mode) Parameter: global label Indirect: Yes	189
PI	Recalls an approximation of π into the X-register (3.14159265359). Keys: π	117
PIXEL	Turns on a single pixel (dot) in the display. The location of the pixel is given by the numbers in the X- and Y-registers. Keys: PGM.FCN PIXEL	135
POLAR	Selects <i>Polar</i> coordinate mode for displaying complex numbers. Keys: MODES POLAR	80
POSA	<i>Position in Alpha</i> . Searches the Alpha register for the target specified in the X-register. If found, returns the character position; if not found, returns -1.	134
PRA	<i>Print Alpha register</i> . Keys: PRINT PRA	102
PRLCD	<i>Print LCD (liquid crystal display)</i> . Prints the entire display. Keys: PRINT PRLCD	101
PRGM	Toggles the calculator in and out of <i>Program-entry mode</i> .	111
PRINT	Selects the PRINT menu.	101
PROB	Selects the PROB (<i>probability</i>) menu.	87
PROFF	<i>Printing off</i> . Clears flags 21 and 55. Keys: PRINT POFF	101

Name	Description, Keys, and Parameters	Page
PROMPT	Displays the Alpha register and halts program execution. Keys: PGM.FCN PROM	129
PRON	Printing on. Sets flags 21 and 55. Keys: PRINT PON	101
PRP	Print program. If a label is not specified, prints the current program. (Not programmable.) Keys: PRINT PRP Parameter: global label (optional) Indirect: No	104
PRSTK	Print stack. Prints the contents of the stack registers (X, Y, Z, and T). Keys: PRINT PRST	101
PRUSR	Prints user variables and programs. Keys: PRINT PRUSR	101
PRV	Print variable. Keys: PRINT PRV Parameter: variable name Indirect: Yes	63
PRX	Print X-register. Keys: PRINT PRX	101
PRΣ	Print statistics. Prints the contents of the summation registers. Keys: PRINT PRΣ	237
PSE	Pauses program execution for about 1 second. Keys: PGM.FCN PSE	131
PUTM	Put matrix. Stores the matrix in the X-register into the indexed matrix beginning at the current element. Keys: MATRIX PUTM	226
PWRF	Selects the power curve-fitting model. Keys: STAT CFIT MODL PWRF	240

Name	Description, Keys, and Parameters	Page
QUIET	Toggles flag 26 to disable/enable the beeper. (Not programmable.) Keys: MODES QUIET	275
RAD	Selects <i>Radians</i> angular mode. Keys: MODES RAD	80
RAN	Returns a <i>random</i> number ($0 \leq x < 1$). Keys: PROB RAN	88
RCL	<i>Recalls</i> data into the X-register. Key: RCL Parameter: register or variable Indirect: Yes	55
RCL +	<i>Recall addition.</i> Recalls data and adds it to the contents of the X-register. Keys: RCL + Parameter: register or variable Indirect: Yes	61
RCL -	<i>Recall subtraction.</i> Recalls data and subtracts it from the contents of the X-register. Keys: RCL - Parameter: register or variable Indirect: Yes	61
RCL ×	<i>Recall multiplication.</i> Recalls data and multiplies it by the contents of the X-register. Keys: RCL × Parameter: register or variable Indirect: Yes	61
RCL ÷	<i>Recall division.</i> Recalls data and divides it into the contents of the X-register. Keys: RCL ÷ Parameter: register or variable Indirect: Yes	61
RCLEL	<i>Recall element.</i> Recalls the current matrix element from the indexed matrix. Keys: MATRIX RCLEL	225

Name	Description, Keys, and Parameters	Page
RCLIJ	Recalls the row- and column-pointer values (<i>I</i> and <i>J</i>) for the indexed matrix. Keys: MATRIX ▲ RCLIJ	224
RDX,	Selects a <i>comma</i> to be used as the radix mark (decimal point). Keys: DISP RDX,	36
RDX.	Selects a <i>period</i> to be used as the radix mark (decimal point). Keys: DISP RDX.	36
REALRES	<i>Real-results</i> . Disables the calculator's ability to return a complex result using real-number inputs. Keys: MODES ▼ RRES	94
REAL?	If the X-register contains a real number, executes the next program line; if the X-register does not contain a real number, skips the next program line.	151
RECT	Selects <i>Rectangular</i> coordinate mode for displaying complex numbers. Keys: MODES RECT	80
RND	<i>Rounds</i> the number in the X-register using the current display format. Keys: CONVERT ▼ RND	86
RNRM	Returns the <i>row norm</i> of the matrix in the X-register.	219
ROTXY	<i>Rotates</i> the 36-bit number in the Y-register by <i>x</i> bits. Keys: BASE LOGIC ROTXY	250
RSUM	Returns the <i>row sum</i> of each row of the matrix in the X-register and returns the sums in a column matrix.	220

Name	Description, Keys, and Parameters	Page
RTN	<i>Return.</i> In a running program, branches the program pointer back to the line following the most recent XEQ instruction. If there is no matching XEQ instruction, program execution halts. From the keyboard, RTN moves the program pointer to line 00 of the current program. Keys: PGM.FCN RTN	143
R<>R	<i>Row swap row.</i> Swaps the elements in rows x and y in the indexed matrix.	225
R↑	<i>Rolls</i> the contents of the four stack registers <i>up</i> one position.	
R↓	<i>Rolls</i> the contents of the four stack registers <i>down</i> one position. Key: R↓	44
R/S	<i>Run/stop.</i> Runs a program (beginning at the current program line) or stops a running program. In Program-entry mode, inserts a STOP instruction into the program.	113
SCI	Selects <i>Scientific</i> display format. Keys: DISP SCI Parameter: number of digits Indirect: Yes	35
SDEV	<i>Standard deviation.</i> Returns s_x and s_y using the current statistical data. Keys: STAT SDEV	232
SEED	Stores a <i>seed</i> for the random number generator. Keys: PROB SEED	88
SF	<i>Sets flag nn</i> ($00 \leq nn \leq 35$; $81 \leq nn \leq 99$). Keys: FLAGS SF Parameter: flag number Indirect: Yes	41
SHOW	Shows full precision of the number in the X-register, the entire Alpha register, or a complete program line.	36

Name	Description, Keys, and Parameters	Page
SIGN	<i>Sign.</i> Returns 1 for $x \geq 0$, -1 for $x < 0$, and 0 for non-numbers. Returns the unit vector of a complex number. Keys: CONVERT ▼ SIGN	86
SIN	<i>Sine.</i> Returns $\sin x$. Key: SIN	80
SINH	<i>Hyperbolic sine.</i> Returns $\sinh x$.	89
SIZE	Sets the number of storage registers. Keys: MODES ▼ SIZE Parameter: number of registers Indirect: No	64
SLOPE	Returns the <i>slope</i> of the linear transformation of the current curve-fitting model. Keys: STAT CFIT SLOPE	240
SOLVE	<i>Solves</i> for an unknown variable. Keys: SOLVER SOLVE (in Program-entry mode) Parameter: variable name Indirect: Yes	189
SOLVER	Selects the SOLVER menu.	178
SQRT	<i>Square root.</i> Returns \sqrt{x} . Key: √x	78
SST	<i>Single step.</i> Moves the program pointer to the next program line. (Not programmable.) Keys: SST (or ▼ if no menu is displayed)	114
STAT	Selects the STAT (statistics) menu.	231
STO	<i>Stores</i> a copy of x into a destination register or variable. Key: STO Parameter: register or variable Indirect: Yes	55
STO+	<i>Store addition.</i> Adds x to an existing register or variable. Keys: STO + Parameter: register or variable Indirect: Yes	61

Name	Description, Keys, and Parameters	Page
STO—	<i>Store subtraction.</i> Subtracts x from an existing register or variable. Keys: [STO] [—] Parameter: register or variable Indirect: Yes	61
STO \times	<i>Store multiplication.</i> Multiplies an existing register or variable by x . Keys: [STO] [\times] Parameter: register or variable Indirect: Yes	61
STO \div	<i>Store division.</i> Divides an existing register or variable by x . Keys: [STO] [\div] Parameter: register or variable Indirect: Yes	61
STOEL	<i>Store element.</i> Stores a copy of x into the current element of the indexed matrix. Keys: [MATRIX] [\blacktriangleleft] [STOEL]	225
STOIJ	Moves the row- and column-pointers to $I = x$ and $J = y$ in the indexed matrix. Keys: [MATRIX] [\blacktriangleleft] [STOIJ]	224
STOP	<i>Stops program execution.</i> Key: [R/S] (<i>in Program-entry mode</i>)	114
STR?	If the X-register contains an Alpha string, executes the next program line; if the X-register does not contain an Alpha string, skips the next program line.	151
SUM	Returns the sums Σx and Σy into the X- and Y-registers [STAT] [SUM]	231
TAN	<i>Tangent.</i> Returns $\tan x$. Key: [TAN]	
TANH	<i>Hyperbolic tangent.</i> Returns $\tanh x$.	89

Name	Description, Keys, and Parameters	Page
TONE	Sounds a tone. Keys: PGM.FCN TONE Parameter: tone number (0–9) Indirect: Yes	144
TRACE	Selects Trace printing mode, which prints a record of keystrokes and results. Keys: PRINT TRACE	102
TRANS	Returns the transpose of the matrix in the X-register. Keys: MATRIX TRAN	219
UVEC	Unit vector. Returns the unit vector for the matrix or complex number in the X-register. Keys: MATRIX UVEC	220
VARMENU	Creates a variable menu using MVAR instructions following the specified global label. Keys: PGM.FCN VARM Parameter: global program label Indirect: Yes	125
VIEW	Views the contents of a register or variable. Keys: PGM.FCN VIEW Parameter: register or variable Indirect: Yes	128
WMEAN	Weighted mean. Returns the mean of x-values weighted by the y-values: $\Sigma xy \div \Sigma y$. Keys: STAT WMN	231
WRAP	Selects Wrap mode, which prevents the indexed matrix from growing. Keys: MATRIX EDIT WRAP	213
X<>	Swaps the contents of the X-register with another register or variable. Parameter: register or variable Indirect: Yes	
X<>Y	Swaps the contents of the X- and Y-registers. Key: xyz	44

Name	Description, Keys, and Parameters	Page
X<0?	X less than zero test. Keys: [PGM.FCN] ▼ X?0 X<0?	151
X<Y?	X less than y test. Keys: [PGM.FCN] ▼ X?Y X<Y?	151
X≤0?	X less than or equal to zero test. Keys: [PGM.FCN] ▼ X?0 X≤0?	151
X≤Y?	X less than or equal to y test. Keys: [PGM.FCN] ▼ X?Y X≤Y?	151
X=0?	X equal to zero test. Keys: [PGM.FCN] ▼ X?0 X=0?	151
X=Y?	X equal to y test. Keys: [PGM.FCN] ▼ X?Y X=Y?	151
X≠0?	X not equal to zero test. Keys: [PGM.FCN] ▼ X?0 X≠0?	151
X≠Y?	X not equal to y test. Keys: [PGM.FCN] ▼ X?Y X≠Y?	151
X>0?	X greater than zero test. Keys: [PGM.FCN] ▼ X?0 X>0?	151
X>Y?	X greater than y test. Keys: [PGM.FCN] ▼ X?Y X>Y?	151
X≥0?	X greater than or equal to zero test. Keys: [PGM.FCN] ▼ X?0 X≥0?	151
X≥Y?	X greater than or equal to y test. Keys: [PGM.FCN] ▼ X?Y X≥Y?	151

Name	Description, Keys, and Parameters	Page
XEQ	Execute a function or program. Key: XEQ Parameter: function or label Indirect: Yes	143
XOR	Logical XOR (<i>exclusive OR</i>). Returns $x \oplus y$. Keys: BASE LOGIC XOR	250
XTOA	<i>X to Alpha</i> . Appends a character (specified by the code in the X-register) to the Alpha register. If the X-register contains an Alpha string, appends the entire string. Keys: PGM.FCN ▾ ▾ XTOA	134
x^2	Square. Returns x^2 . Keys: x^2	78
YINT	<i>Y intercept</i> . Returns the y-intercept of the curve fitted to the current statistical data. Keys: STAT CFIT YINT	240
y^x	<i>Power</i> . Returns y^x . Keys: y^x	78
$\int f(x)$	Selects the $\int f(x)$ menu.	197
$1/x$	<i>Reciprocal</i> . Returns $1 \div x$. Key: $1/x$	78
10^x	<i>Common exponential</i> . Returns 10^x . Keys: 10^x	78
+	<i>Addition</i> . Returns $y + x$. Key: +	78
-	<i>Subtraction</i> . Returns $y - x$. Key: -	78

Name	Description, Keys, and Parameters	Page
\times	<i>Multiplication.</i> Returns $x \times y$. Key:	78
\div	<i>Division.</i> Returns $y \div x$. Key:	78
$+/-$	Changes the sign of the number in the X-register. While entering an exponent, can also be used to change the sign of the exponent. Key:	78
$\Sigma +$	<i>Summation plus.</i> Accumulates a pair of x- and y-values into the summation registers. Key:	228
$\Sigma -$	<i>Summation minus.</i> Subtracts a pair of x- and y-values from the summation registers. Keys:	232
Σ REG	<i>Summation registers.</i> Defines which storage register begins the block of summation registers. Keys: Parameter: register number Indirect: Yes	234
Σ REG?	Returns the register number of the first summation register.	234
\rightarrow DEC	<i>To decimal.</i> Converts the octal (base 8) representation of a number to decimal (base 10). Note: This function is included to provide program compatibility with the HP-41 (which uses the function name DEC) and is not related to the Base application (chapter 16).	171
\rightarrow DEG	<i>To degrees.</i> Converts an angle-value from radians to degrees. Returns $(360/2\pi)x$. Keys:	83
\rightarrow HMS	<i>To hours, minutes, and seconds.</i> Converts x from a decimal fraction to a minutes-seconds format. Keys:	83

Name	Description, Keys, and Parameters	Page
→HR	To hours. Converts x from a minutes-seconds format to a decimal fraction.	83
→OCT	To octal. Converts a decimal number to the octal representation. Note: This function is included to provide program compatibility with the HP-41 (which uses the function name OCT) and is not related to the Base application (chapter 16).	171
→POL	To polar. Converts x and y to the corresponding polar coordinates r and θ. If the X-register contains a complex number, converts the two parts of the number to polar values. Keys: [CONVERT] →POL	84
→RAD	To radians. Converts a angle value in degrees to radians. Returns $(2\pi/360)x$. Keys: [CONVERT] →RAD	83
→REC	To rectangular. Converts r (in the X-register) and θ (in the Y-register) to the corresponding rectangular coordinates, x and y. If the X-register contains a complex number, converts the two parts of the number to rectangular values. Keys: [CONVERT] →REC	84
◀	Backspaces or clears X-register. In Program-entry mode, deletes the current program line.	25
←	Moves left one element in the indexed matrix.	212
↑	Moves up one element in the indexed matrix.	212
↓	Moves down one element in the indexed matrix.	212
→	Moves right one element in the indexed matrix.	212
%	Percent. Returns $(x \times y) \div 100$. (Leaves the y-value in the Y-register.) Keys: [%]	79
%CH	Percent change. Returns $(x - y)(100 \div y)$.	79

Subject Index

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For Information About Using the Calculator. If you have questions about how to use the calculator, first check the table of contents, the subject index, and "Answers to Common Questions" in appendix A. If you can't find an answer in the manual, you can contact the Calculator Support department:

Hewlett-Packard
Calculator Support
1000 N.E. Circle Blvd.
Corvallis, OR 97330, U.S.A.

(503) 757-2004
8:00 a.m. to 3:00 p.m. Pacific time
Monday through Friday

For Service. If your calculator doesn't seem to work properly, refer to appendix A to determine if the calculator requires service. The appendix also contains important information about obtaining service. If your calculator requires service, mail it to the Calculator Service Center:

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Printed in U.S.A. 6/88