TI-84(Plus)| TI-83(Plus)|TI-82 QUICK REFERENCE

ejd: revised 08/05

Adjust Display Contrast
2nd (press and release)
▲ (hold to darken)
▼ (hold to lighten)

Edit Keys
Delete
Position cursor on character
DEL
Insert
Position cursor to right of insertion point
2nd **[INS]** Type character

Recall Former Entries
2nd **[ENTRY]**
(repeat until entry appears; this expression is editable)

Negative/Opposite Key
(-) (gray key)
Type number; if more than one term, use ( )

Raising a Base to a Power
Type base ^ Type exponent
Note: **To Square**
Type base x^2

Storing a Value for a Variable
Type number
STO▶ X,T,Θ,n ENTER
TI-82 X,T,Θ
Note: To evaluate function on home screen, type expression

Obtaining Fractional Results

Example: $\frac{1}{2}+\frac{2}{3}$:

(**1** ÷ **2**) + (**2** ÷ **3**)
MATH **1:Frac** ENTER

Explicit/Implicit Operations
Explicit: 2 × 3
Implied: 2(3) or $2x$
TI-83 does not differentiate;
TI-82 does implied operations before explicit operations
Example: **12÷2×3** vs. **12÷2(3)**
1/2*x* vs. **1/2 * *x*** or **(1/2)*x***

Define a Function
Y= Enter function(s)
Note: To remove unwanted functions, place cursor at start of line and press CLEAR

Generate a Table of Values
Define function
2nd **[TBLSET]**
TblStart Type start value
ΔTbl Type increment for input
AUTO, AUTO (selected)
2nd **[TABLE]**
TI-82 **TblMin**

Graph a Function
Define function
Set Viewing Window (see below)
GRAPH
TRACE ◀ or ▶ to see coordinates
Note: **StatPlot** should be off
2nd **[STAT PLOT]**
4:PlotsOff ENTER

Set Viewing Window
WINDOW
Type desired settings

Quick Set "Friendly" Windows
Standard Window
ZOOM **6:ZStandard**
Integer Window
ZOOM **6:ZStandard**
ZOOM **8:Zinteger** ENTER
Decimal Window
ZOOM **4:ZDecimal**

Evaluate a Function entered in Y=
From GRAPH Screen
TRACE
Type input
ENTER
TI-82 2nd **[CALC]** **1:value** Type input ENTER
From Home Screen
VARS
▶ **Y-VARS**
1:Function
TI-82 2nd **[Y-VARS]**
1: Y_1 (for function in Y_1)
(input number) ENTER

Turning Function "on" or "off"
Y=
Position cursor on "=" ENTER
Highlight "=" to select,
remove highlight to deselect

Return to Home Screen
2nd **[QUIT]**

Absolute Value Function
MATH ▶ **NUM**
1:abs(
Type argument
) ENTER
TI-82 2nd **[ABS]** Type argument ENTER
Note: Use ( ) if more than 1 term

Factorial Function
Enter whole number
MATH
▶ ▶ ▶ **PRB**
4: ! ENTER

Reciprocal Function
Type number
x^{-1} ENTER

INT Function (Greatest Integer Function)
MATH ▶ **NUM**
5:int(
Type number)
ENTER
TI-82 **4:int** Type number ENTER

Generate Random Numbers
To change factory set seed value:
From Home Screen, type a whole number
STO▶ MATH
▶ ▶ ▶ **PRB**
1:rand ENTER

To generate random numbers from 1 through 10
From Home Screen
MATH ▶ **NUM**
5:int(
MATH ▶ ▶ ▶ **PRB**
1:rand
× **10**) + **1** ENTER
TI-82 **4:int** (
Press ENTER again to generate another random number

Enter Data in Lists

[STAT] **1:Edit**

Clear existing data from list(s) if necessary: highlight List Name, [CLEAR] [ENTER]

Type data in list(s). (Press [ENTER] after typing each element.)

Graphing Discrete Points

Enter data in lists (see above)

Note: [Y=] menu must be clear or functions must be deselected

Note: StatPlots other than the one you are using must be turned off: [2nd] **[StatPlot] 4:Plots Off** [ENTER]

[2nd] **[STATPLOT]**
1:Plot1...
ON (position cursor [ENTER])
Choose *Type*
e.g. **Scatter Plot**
Choose *Xlist, Ylist, Mark*

[WINDOW] (adjust settings), [GRAPH]
Or use Quick Set Window
[ZOOM] **9:ZoomStat**

[TRACE] Use [◄] or [►] to view coordinates

Generate New Data in L_2 Using an Existing List L_1

[STAT] **1:Edit**
Highlight L_2 with cursor
[2nd] [L_1] [+] **3** creates a new list L_2, adding 3 to each element of L_1

Sort Data in list L_1

[STAT] **1:Edit**
Highlight L_1
[STAT] **2:SortA (**
[2nd] [L_1] [)] [ENTER]
[STAT] **1:Edit** (to see new list)

Statistical Functions

To find **Mean**
Enter data in List L_1
[2nd] **[QUIT]** for Home Screen
[2nd] **[LIST]** [►] [►] **MATH**
3:mean (
[2nd] [L_1] [)]
[ENTER]

TI-82 [►]

To find **Median**
Same as above except
4:median (

To find **Standard Deviation**
Enter data in L_1
[2nd] **[LIST]** [►] [►]**MATH**
7:stdDev([2nd] [L_1] [)] [ENTER]

TI-82
[STAT] [►] **CALC**
1:1-Var Stats [2nd] [L_1]
[ENTER]

Create a Linear Regression Model for Data

Enter paired data in lists L_1, L_2
Construct scatter plot
[STAT] [►] **CALC**
4:LinReg(ax+b)
[ENTER]
[2nd] [L_1] [,] [2nd] [L_2]
[ENTER]

TI-82
5:LinReg(ax+b)

Note: Turn diagnostics on if necessary: [2nd] [CATALOG]
DiagnosticOn [ENTER] [ENTER]

Store Regression Model as a Function

[Y=] Place cursor on function to be assigned regression model
[VARS] **5:Statistics**
[►] [►] **EQ**
1:RegEQ
Regression Model appears in [Y=] Menu

TI-82
7:RegEQ

Note: **TI-83**, Construct Scatter Plot then both **Create and Store Model:** [STAT] [►]**CALC**
4:LinReg(ax+b) [2nd] [L_1] [,]
[2nd] [L_2] [,] [VARS] [►] **Y-VARS**
1:Function 1:Y_1 [ENTER]

Generate a Sequence

From Home Screen
[2nd] **[LIST]** [►]**OPS**
5:seq(*expression, variable, begin, end, increment*)
[ENTER]

TI-82
[2nd] **[LIST]**

Sum the Elements of a Sequence

Store the sequence in a list:
[STO►] [2nd] [L_1]
[ENTER]
[2nd] **[List]**
[►] [►] **MATH**
5:sum(
[2nd] [L_1] [)]
[ENTER]

TI-82
[►] **MATH**
5:sum
[2nd] [L_1]
[ENTER]

Parametric Graphing

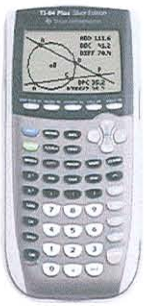
[MODE]
Use [▼] and [►] to highlight **Par**
[ENTER]
Use [▼] and [►] to highlight **Dot**
[ENTER]

Example: Plot the function $y(x)=5x-100$ in parametric mode.
First define x = T
and y=5T-100:
[Y=] Type T for X_{1T}
and 5T-100 for Y_{1T}

[WINDOW] Set viewing window:
$[0, 300]_{50}$ by $[-500, 1500]_{500}$

The values of Tmin, Tmax, and Tstep determine the function values that will be visible when tracing: Tmin = 0
Tmax = 300
Tstep = 5

[GRAPH]
[TRACE] [►] (to view coordinates)



Instructional Technologies for Teaching and Learning Mathematics

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