Fx-82EX Booklet

Fx-82EX Overview

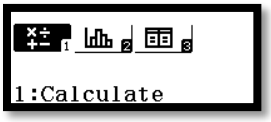
Main keys:

1. ON: Turns on the calculator [ON]
2. Menu : Calculator main page [MENU]
3. Shift : Activates all yellow functions [SHIFT]
4. Alpha : Activate all Red functions [ALPHA]
5. AC : Clear screen [AC]
6. DEL: Delete terms separately [DEL]
7. Option: Transfer to more detailed calculation options [OPTN]

To turn off calculator: [SHIFT] [AC]

To reset calculator: [SHIFT] [9] [3] [=] [AC]

Main menu screen



In Calculate we can do operations, prime factorization, simplifying fractions, absolute value, Factorial, logarithm and exponents

In statistics we can find all analyses on one screen

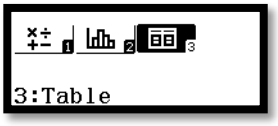


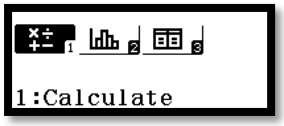
Table is used to input function and analyze data with one or two function input

Sample Questions using fx-82EX

1) Order of operation

To log into calculate:

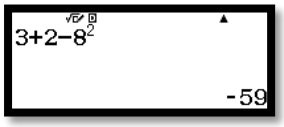
[MENU] [1]



An empty screen will appear

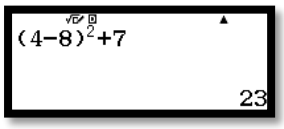
Example 1:
$3 + 2 - 8^2$
Follow steps for input:

[3] [+] [2] [−] [8] [x^2] [2] [=]



Example 2:
$(4 - 8)^2 + 7$
Follow steps for input:

[(] [4] [−] [8] [)] [x^2] [2] [▶] [+] [7] [=]

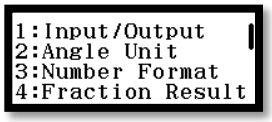


2) Rounding

Log into calculate [MENU] [1]

Setup calculator for rounding to nearest hundredths

[SHIFT] [MENU] [3] [1]

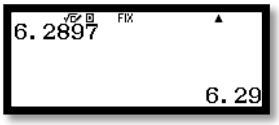


Example:

Round to nearest hundredths 6.2897

Follow the steps using fx-82EX

[6] [•] [2] [8] [9] [7] [=]



3) Statistics

In order to solve statistics log into statistics from main menu [MENU] [2] and choose the type of your Statistics. In this session we will solve 1 variable statistics and 2 Variable (linear equation)

Example 1:

Rami got the following grades in Mathematics:

30, 32, 35, 34, 36, 40, 32, 33, 36, 41, 44, 37,

Calculate the mean. Calculate the standard deviation

<u>Steps using Calculator fx-82EX:</u>

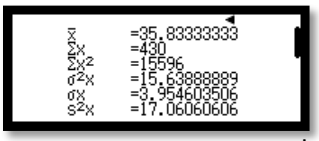
1st log into Statistics [MENU] [2]

2nd Choose 1- Variable [1]

3rd fill up the table

[3] [0] [=] [3] [2] [=] [3] [5] [=] [3] [4] [=] [3] [6] [=] [4] [0] [=] [3] [2] [=] [3] [3] [=] [3] [6] [=] [4] [1] [=] [4] [4] [=] [3] [7] [=] [AC]

4th click option key [OPTN] [2] for calculation.



A screen will show all calculations scroll down by arrow to see more result

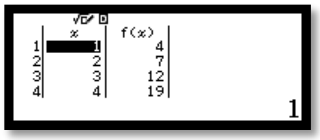
4) Table

In order to use table using fx-82EX log into main menu screen and choose Table [MENU] [3]

Example 1 : Check whether the function $f(x) = x^2 + 3$ is decreasing or increasing over the domain $x\epsilon(1,5)$.

Steps using calculator: Make sure the calculator is loged in to Table

[ALPHA] [)] [x^2] [+] [3] [=] [=] [1] [=] [5] [=] [=]

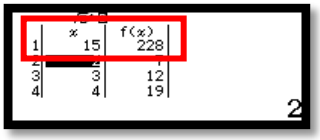


The table will show the result, now look at the f(x)

Values are they increasing or decreasing?

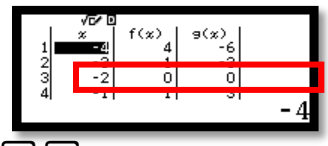
- To evaluate the function at any given "x"value, move the marked black space by arrow downword or upword in "x" column and replace it by any "x" value
  Example 2 : change the 1st "x" value by 15
  Steps :

  [1] [5] [=]



Example 3 : what is the intersection between the two given functions

$f(x) = x^2 + 4x + 4 \quad and \quad g(x) = 3x + 6 \ where \ -4 < x < 4$



Steps using calculator: make sure to be in the table mode MENU 8

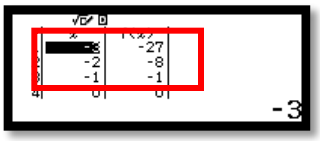
ALPHA) x^2 + 4 ALPHA) + 4 = 3 ALPHA) + 6 = − 4 = 4 = =

In order to locate the intersection point just check the table where $value \ f(x) = g(x)$

So the intersection point is (2,0)

Example 4: For what values of $x, f(x) = x^3 \ is \ negative$, $in \ the \ domain \ -3 \leq x \leq 3$

Steps using calculator: make sure table mode is activated MENU 8



ALPHA) SHIFT x^2 = = − 3 = 3 = =

Check the negative values of f(x) from the table with respect to “x”

Domain where f(x) is negative : $x\epsilon[-3,0)$