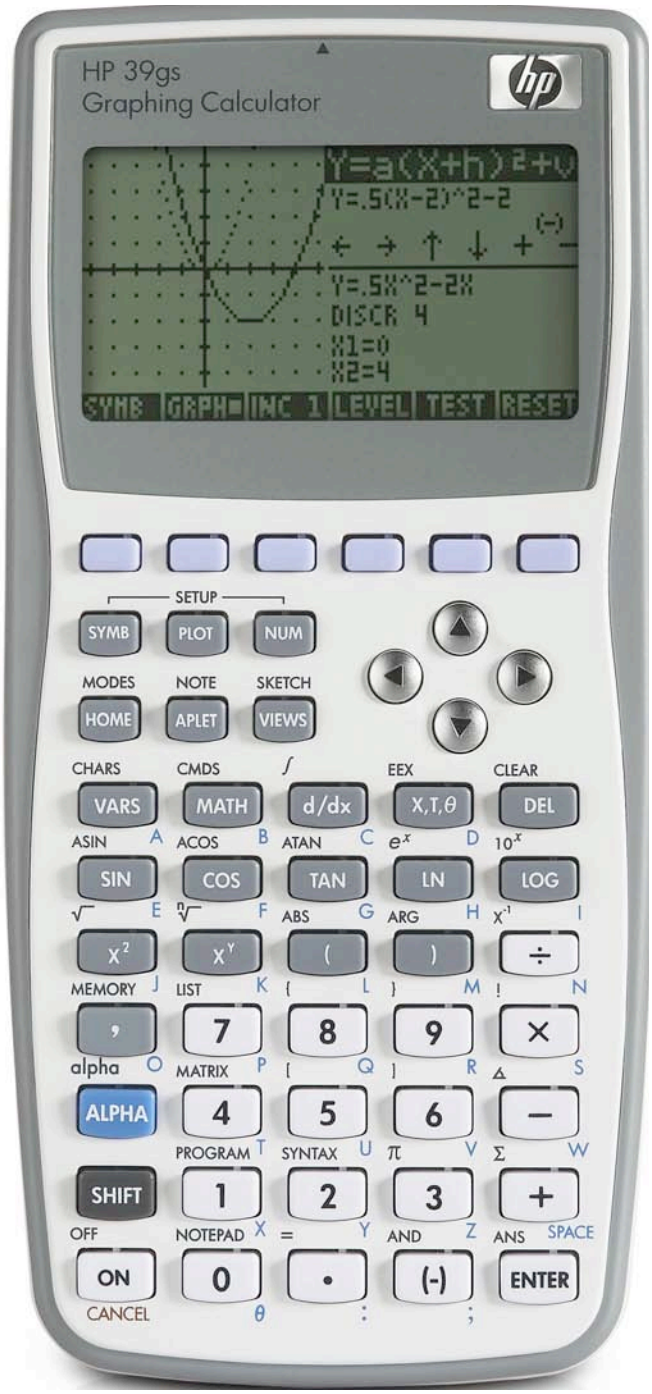
hp calculators

HP 39gs Frequently Asked Questions



Why are the default axes in the PLOT view so strange?

What does 'Build Your Own' mean in the NUM SETUP view?

When I find a solution in Solve, how do I use it elsewhere?

How can I get exact solutions such as fractions of pi?

How can I set the date and time?

Can you use Reverse Polish Notation (RPN)?

Why does entering a function of X(X+2) give an error message?

Why are the default axes in the PLOT view so strange?

The screen on the hp 39gs is 131 pixels wide by 64 pixels tall. A pixel ('picture element') is a single dot on the screen. There were good reasons in the design process for choosing these figures but for the average user it means that the best scales to use are ones which take these numbers into account.

The default screen is -6.5 to 6.5 on the x axis. If you include the dot for zero, this means that there are 131 dots with each dot on the screen being 0.1 on the x axis. The advantage of this is that when TRACE is used in the PLOT view and the cursor jumps from dot to dot, the jumps are "nice" numbers. The y axis is similar.

What does 'Build Your Own' mean in the NUM SETUP view?

This can be quite useful. Normally the NUM view is a simple table, with the starting value and the step size controlled in NUM SETUP by the values in NUMSTART and NUMSTEP.

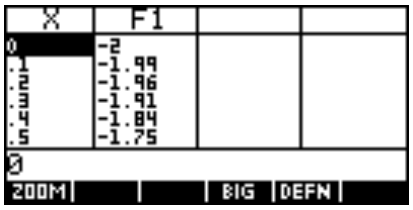


Figure 1

However, if you want to use your own values for x rather than just accepting these values then go to NUM SETUP and press CHOOSE to change NUMTYPE to 'Build Your Own'.

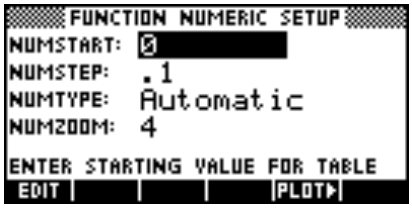


Figure 2

Figure 3

You can now type in any values you like in the NUM view.

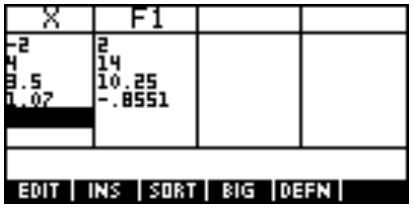


Figure 4

When I find a solution in Solve, how do I use it elsewhere?

The results of a SOLVE can be used easily in any other view. Just go to the HOME view (or any other view) and enter T, the value solved for. The last value will be retrieved.

How can I get exact value solutions such as fractions of pi?

This is a bit involved, but it does work nicely once you get the hang of it. As an example, we'll use the Function aplet to solve for x in the equation 2sin x + 2 = 1 on the domain of 0 to 2PI. Suppose you've just found the value of the first solution.

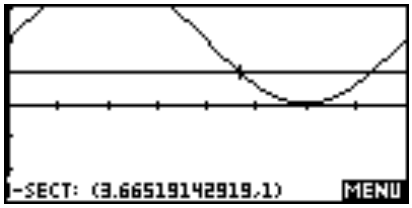


Figure 5

Change to the MODES screen and set the number format to 'Fraction 6'. Now change to the HOME view and type in X/PI. The answer is 7/6, so the required value is 7PI/6. Basically you are removing the from the answer and giving the calculator the chance to tell you what the associated fraction was.

DON'T FORGET to change out of fraction mode when you finish.

How can I set the date and time on my hp 39gs?

The hp 39gs has an internal clock which you can easily set to correct values. The current settings are displayed using the DISPTIME command in the HOME view

For example, to set the date in the HOME view to be the 7th of November, 2006 you can use the command 11.072006 STO> DATE, where > stands for the STO> key on screen key 1. The format is MM.DDYYYY

In a similar way, to set the time to be 3:56pm (and 7 seconds) then the command would be: 15.5607 STO> TIME
(Note the 24 hour clock time).

The DISPTIME command would then show this date and time, either in the HOME view or in a program.

Can you use Reverse Polish Notation (RPN) on the hp 39gs?

No. (What can I say? Sometimes the answer is simple!)

Why does entering a function of X(X+2) give an error message?

Normally the calculator will realize when you are using an 'implied multiplication' such as '3X' to mean '3*X', but it sometimes gets confused.

You have probably noticed that all functions are used with brackets, like SIN(35).

When you write X(X+2) the calculator interpret this as a function called X, rather than as a multiply by X. When it tries to evaluate the function X it finds that there is no such function and puts up the error message shown. The solution is simply to remember to include the multiplication sign.

Many people also run across this problem in the Solve aplet. For example, entering the equation S=A(1-R^N)/(1-R) to solve a geometric progression problem will only give error messages when you try use it. In this case you have to remember to specifically put a * between the A and the (1-R^N) to give S=A*(1-R^N)/(1-R).