

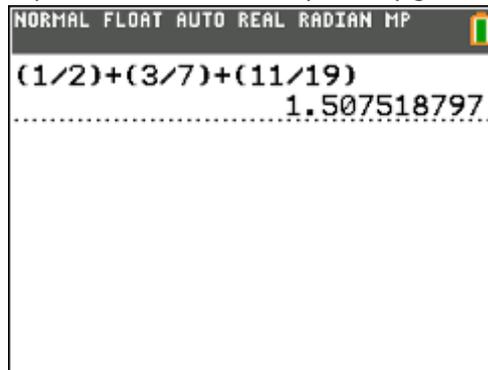
Set of instructions to Texas
Instruments TI-84 Plus CE-T
Graphing calculator.

Set of content:

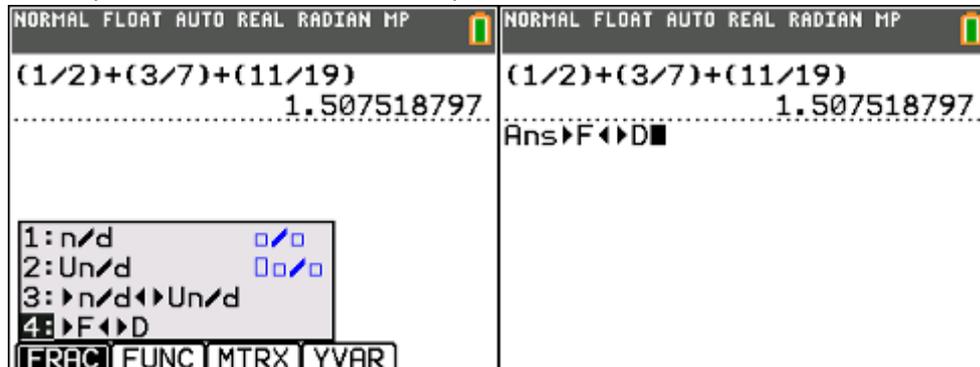
1. Fractions
2. Missing digit
3. Probability
4. Quadratic equation
5. Graphs
6. Linear regression
7. Geography app
8. The finance app
9. Periodic table
10. Downloading games

Decimal fractions and vulgar fractions

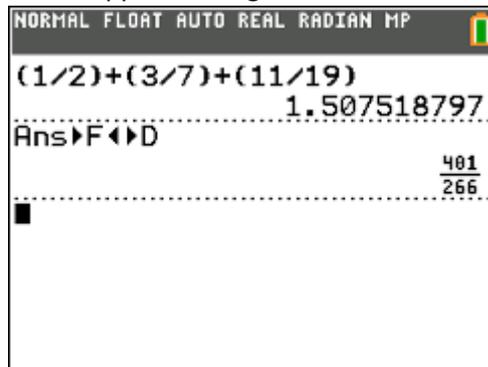
1. Sometimes when do some operations on fractions you may get a result that is unsatisfying.



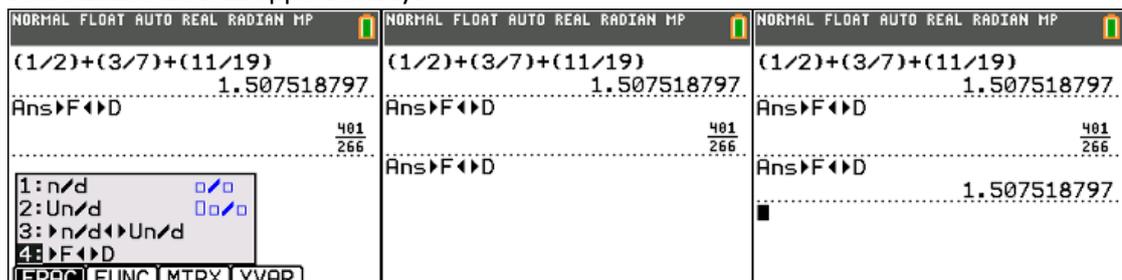
2. When you need you result in different fraction the only thing you have to do is pressing [alpha] and [y=]. And then choose the 4th option [4].



3. Press [enter] and your result will appear in vulgar fraction.

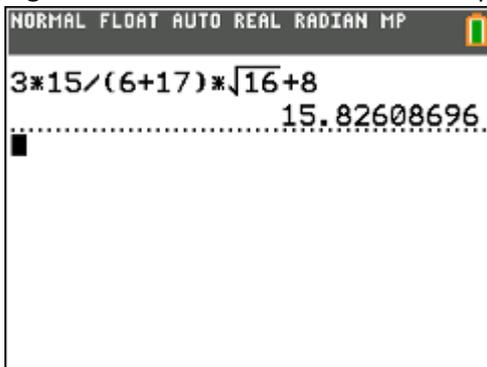


4. You can also do it in opposite way.

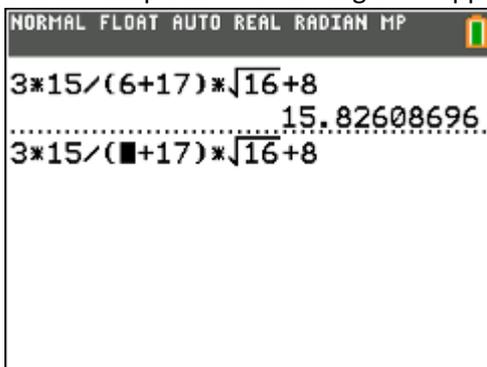


Missing digit

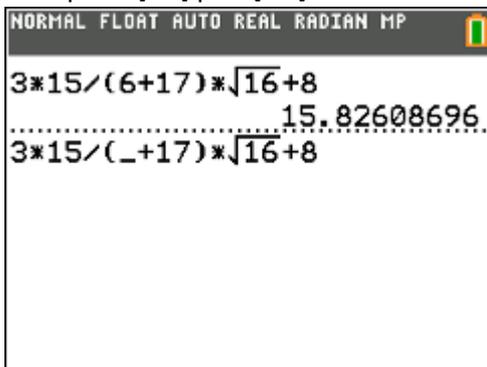
1. I think many times you have this problem. You write an operation but you've missed one digit. And what? You need to write all operation again?



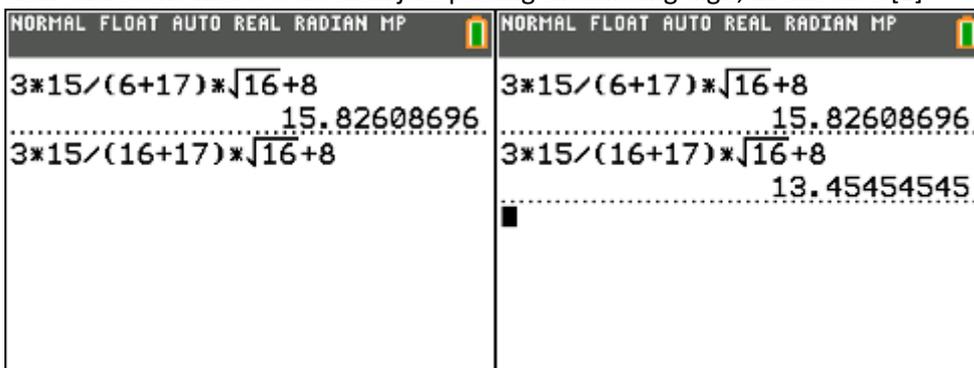
2. No more. Copy the operation by pressing [enter] on it and in the new one move the cursor in the correct place. The new digit will appear on the left from it.



3. Now press [2nd] plus [del] – int. The underscore will appear.



4. Now there's no more to do than just putting the missing digit, in this case [1]

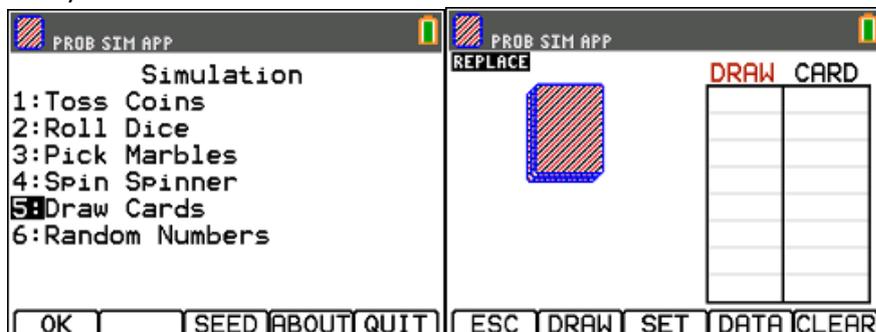


Probability

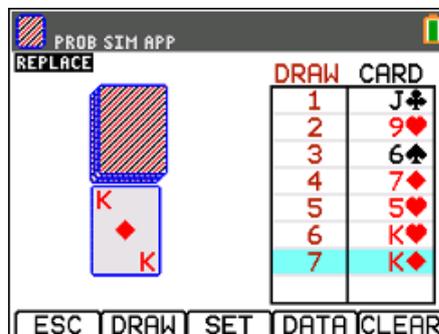
1. In your calculator there are a lot of ways to make a simulation. The 1st thing to do is pressing [apps] and then choose [0] for Prob Sim.



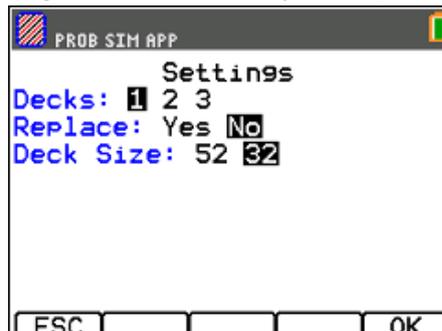
2. There are 6 ways to do a simulation and let's see how it would look like with cards. Press [5].



3. By pressing [window] reserved for DRAW one card from a shuffled deck is going to be removed.



4. If you want to change something in your deck you have an ability to do 3 thing. Press [zoom] – SET and here you can choose if you want to use multiply decks. You can also choose if picked card is going to be removed from the deck or it is going to come back and can be find again. The 3rd option is to change the size. You can pick 52 (normal deck) or 32 (7-A).

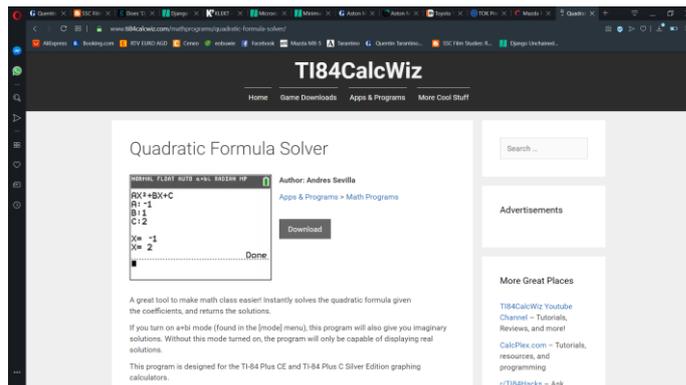


Quadratic Equation Program

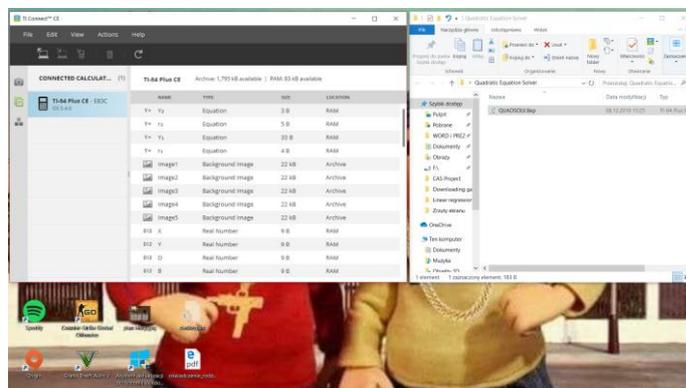
Probably from the early beginning you will have this problem:

How to solve quadratic equation?

1. Install Quadratic Equation program from <https://www.ti84calcwiz.com/mathprograms/quadratic-formula-solver/>.



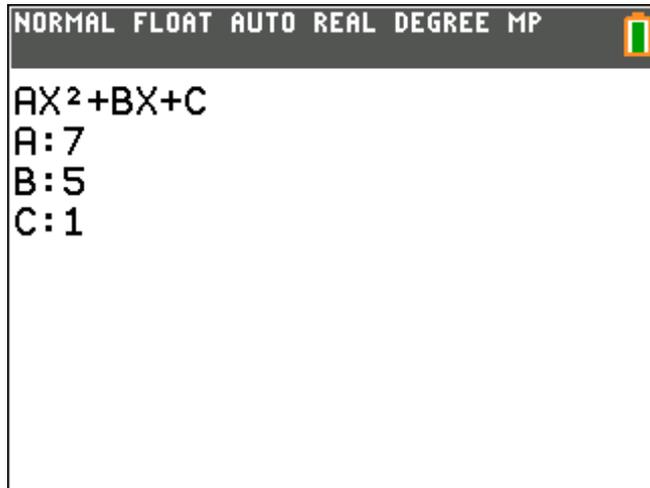
2. Drag all downloaded files into your calculator.



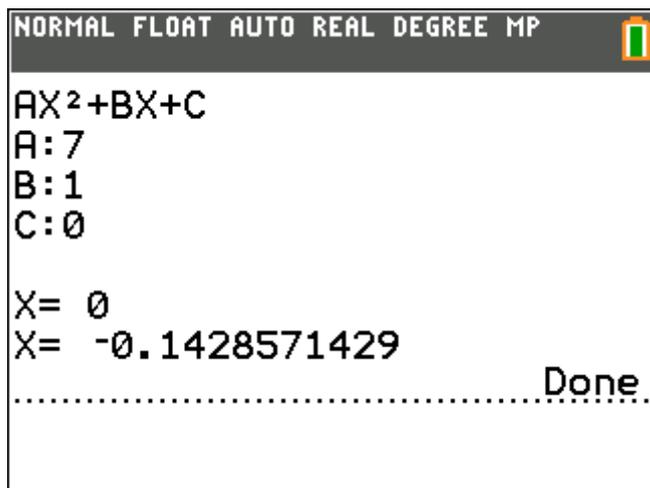
3. Open up your calculator and press [prgm] and choose program named "QUADSOLV".



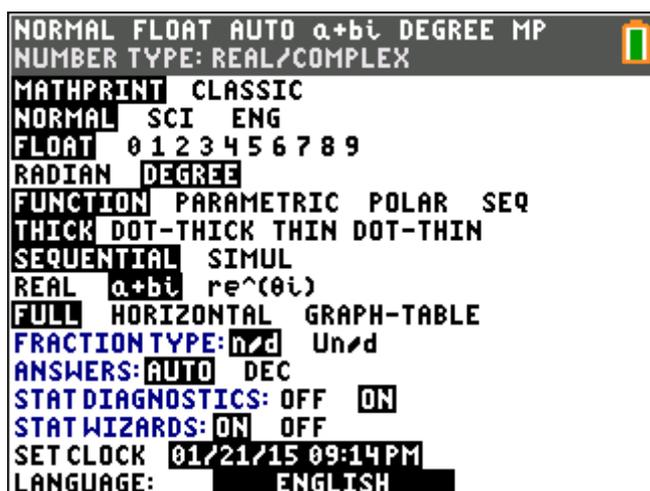
- Enter coefficients a, b and c (If any of these terms are not present, just type in 0 as the coefficient).



- The results should be seen on your screen.

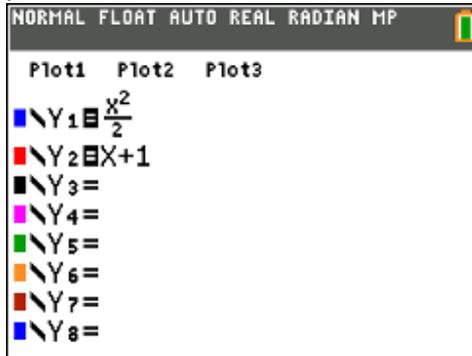


- If you would like your calculator to provide you with imaginary solutions, be sure to enter a+bi mode by pressing the [Mode] button and selecting a+bi mode.



Viewing the Graph and Table Simultaneously

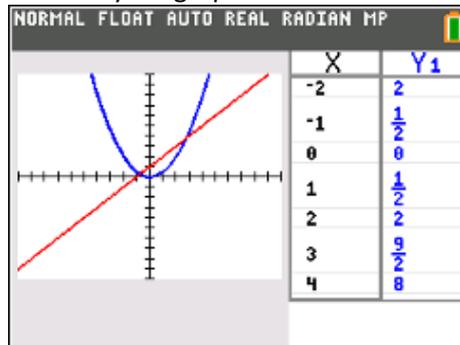
- To see your graph and the table at the same time firstly you need to have a function. Press [y=] and type your equations.



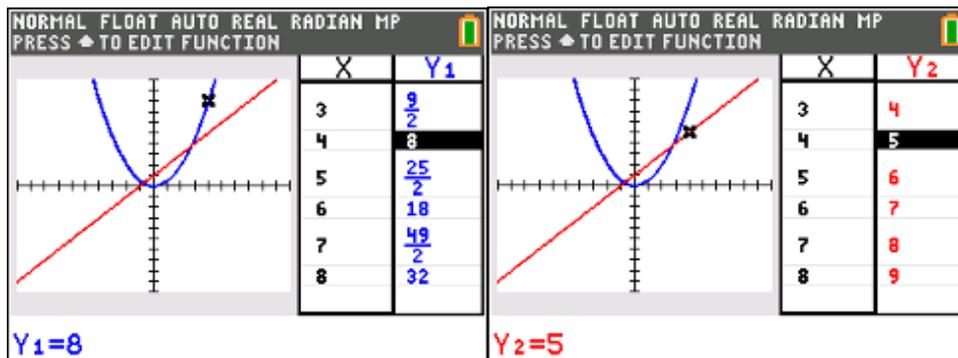
- Press the [mode]. About midway through the screen you will see a row that says FULL HORIZONTAL GRAPH-TABLE. Choose the 3rd by pressing [enter]



- Now press [graph] and you will see your graph and table simultaneously.

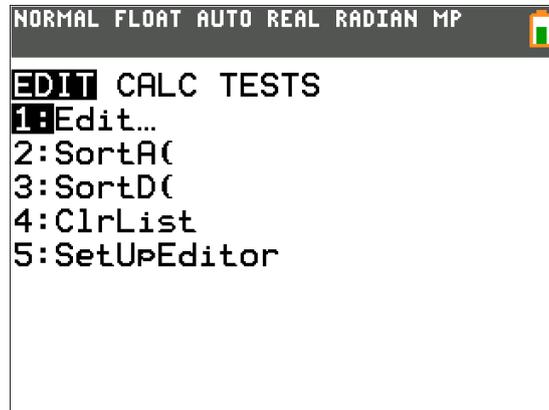


- If you want see other values in the table press the [2nd] and [graph]. Then you navigate using arrows



Linear regression

1. Press [stat] and choose the first option [Edit...].



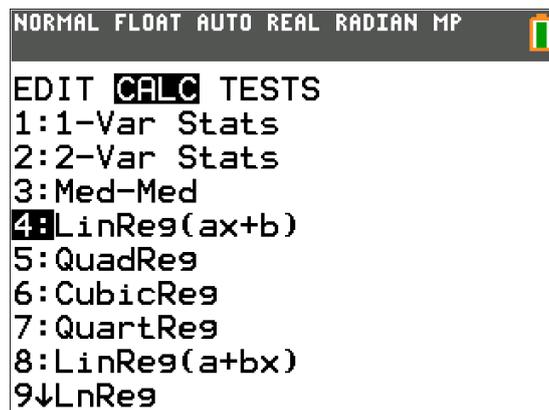
2. In the first column [L1] enter how many numbers you want to have (in that case it's 10). In second one [L2] enter numbers that you've got (the order doesn't matter).

A calculator screen showing a list editor with columns L1, L2, L3, L4, L5, and 2. The data entered is as follows:

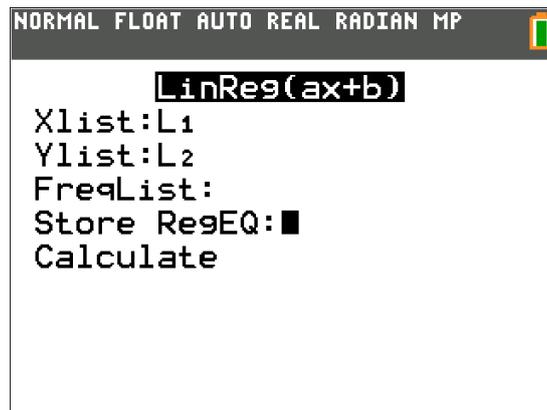
L1	L2	L3	L4	L5	2
1	15	-----	-----	-----	
2	10				
3	12				
4	17				
5	16				
6	14				
7	18				
8	13				
9	15				
10	16				
-----	-----				

Below the table, the text "L2(10)= 16" is displayed.

3. After entering the data, again press [stat], right arrow to [CALC] and choose 4th option [LinReg(ax+b)].



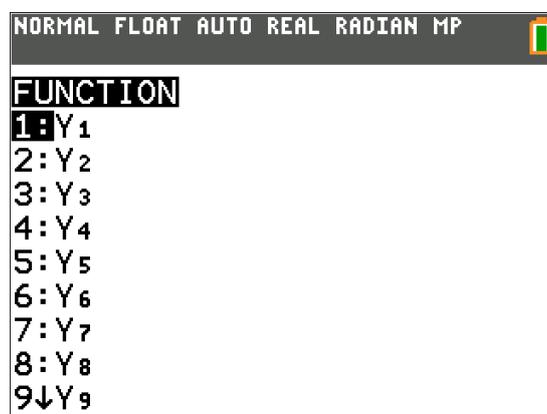
4. In [LinReg(ax+b)] choose [Store RegEQ] by pressing [vars] button (NOT [enter]!).



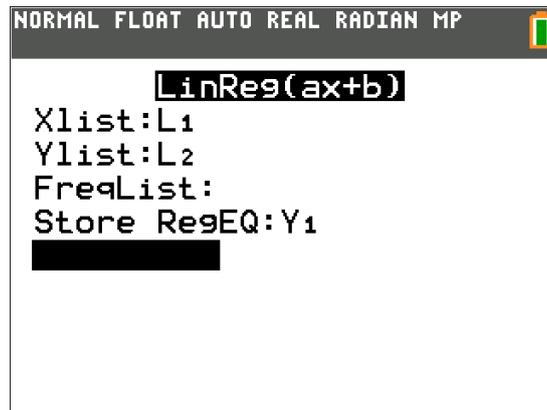
5. In next step, arrow right to [Y-VARS] and choose 1st option [Function...]



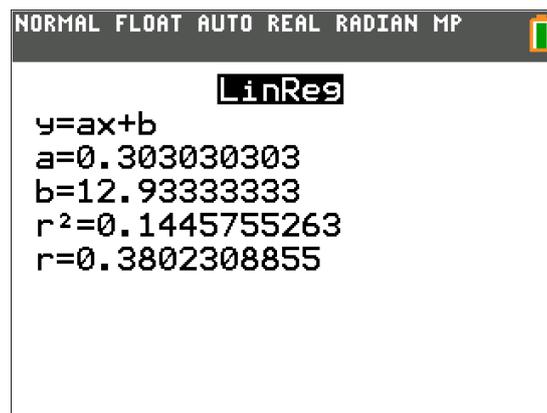
6. In [FUNCTION] choose 1st option [Y₁].



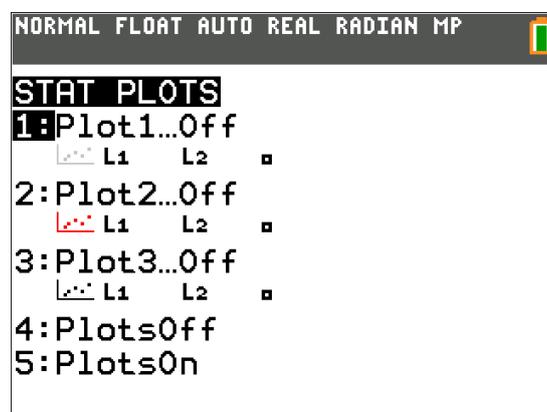
7. Press [Calculate].



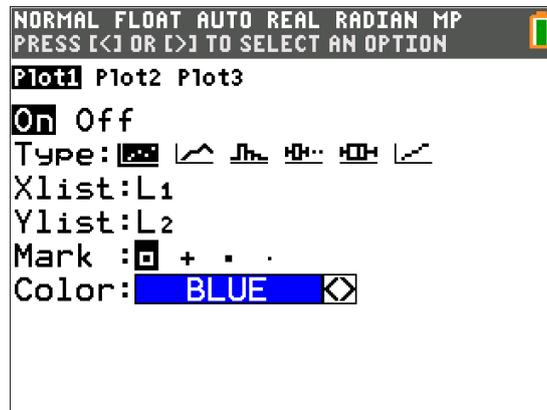
8. Your graphing calculator will display the form of the equation as $y=a+bx$ and list the values for the two coefficients (a and b). Press [2nd] and [y=].



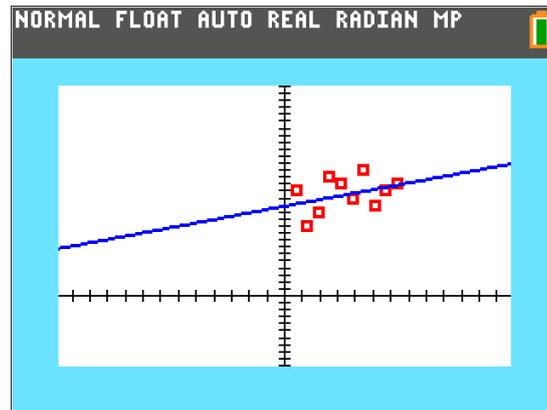
9. Choose the 1st option [Plot1].



10. Turn on the [Plot1]. You can also change the features of your linear regression if you want:
Type, mark color etc.

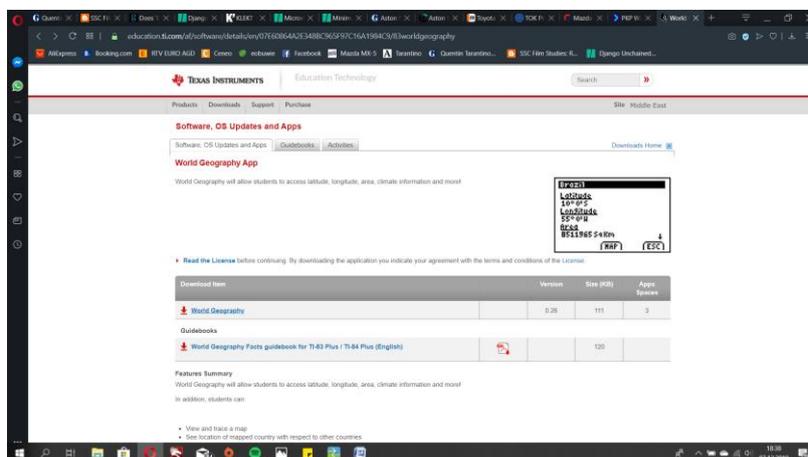


11. Press [graph] to see how your linear regression looks like.

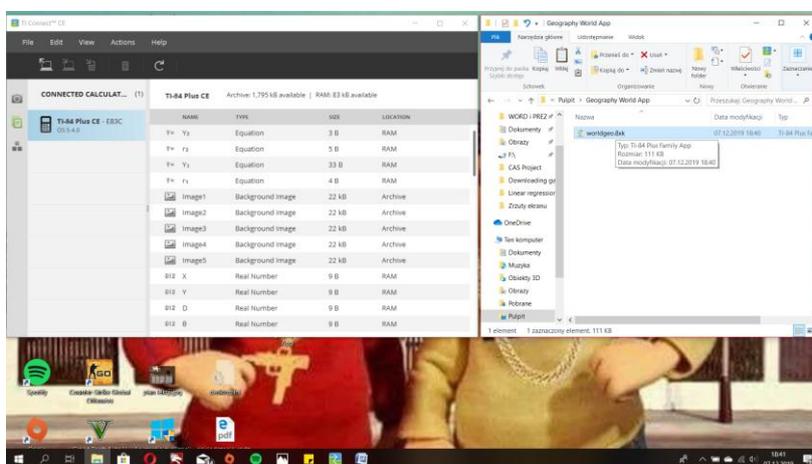


Download World Geography app

1. Download files from <https://education.ti.com/af/software/details/en/07E60864A2E348BC965F97C16A1984C9/83worldgeography>.



2. Similarly to installing games, drag all files to your calculator.

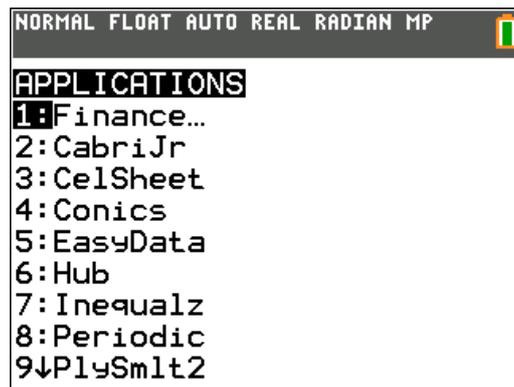


3. Open up your calculator and press [apps] and choose the app named "WorldGeo".
4. Unfortunately none of us have TI-83 Plus / TI-84 Plus, so we can not show you how the application looks like in the calculator 😞.

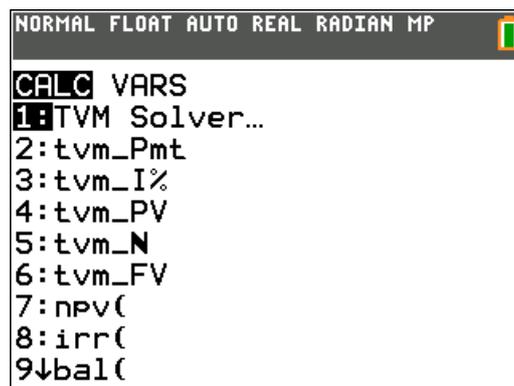
The finance app

If you want to calculate the interest rate, monthly payments, duration of the loan etc. you need to use the finance app.

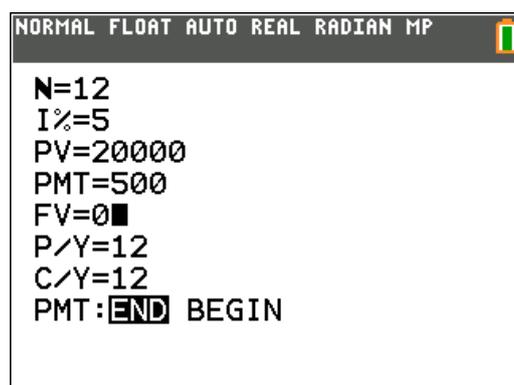
1. Press [apps] and choose the first option [Finance...].



2. After entering [Finance...], choose [TVM Solver...].



3. N - the number of total payment periods
I% - the interest rate (as a %)
PV - the present value of the loan
PMT - the amount of the payment (must be entered as negative number)
FV - the future value of the loan when it is paid off
P/Y - the number of payments per year (monthly – 12, annually – 1)
C/Y - the number of compounding periods per year



4. For example:

You want to buy your dream, red sports car for \$40,000. The interest rate is 2.5% and you can afford a monthly payment of \$590. With the finance app you can calculate how long will it take you to pay off the loan.

N – leave empty

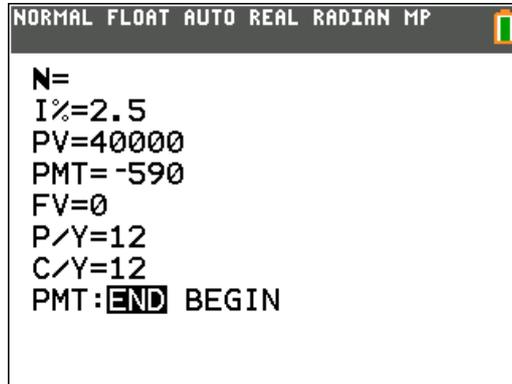
I% - 2.5

PV – 40000

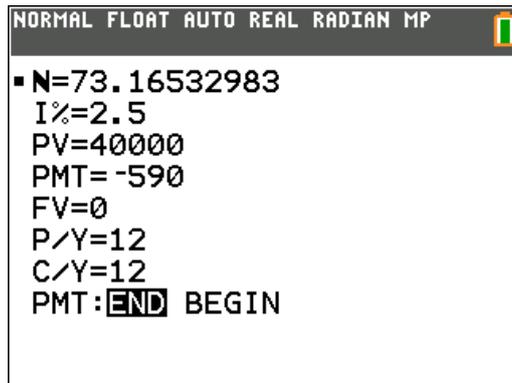
PMT -- -590

FV – 0

P/Y and C/Y – 12



5. Press [alpha] and [enter] to get the result.



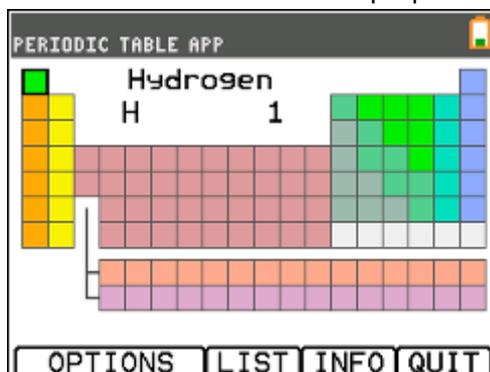
6. You need to pay off the loan for about 73 months. Quite long.

Periodic table

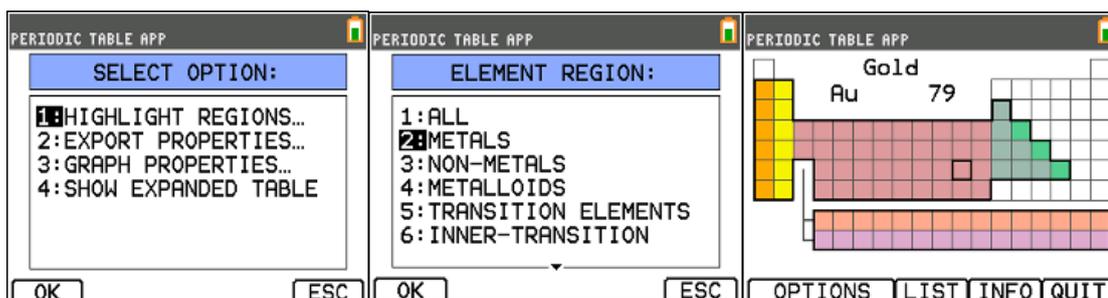
1. Press [apps] and choose the 8th option [Periodic]



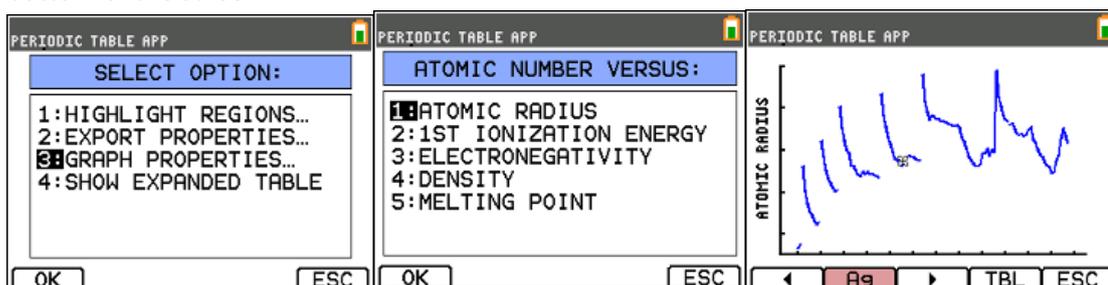
2. Here you have access to all chemical elements and their properties



3. You can for example find which elements are metals. To do it you have to press [y=], [1] and then chose which region you want to highlight. In this case metals [2].



4. To get information about periodic trends you can do it easily by pressing [y=] for options and then press [3] and choose for example atomic radius [1] to see the graph. Next you can navigate using arrows across the all elements. You see the symbol of the element at the bottom of the screen.



5. By pressing [zoom] you can see the list of all elements along with the symbol and their atomic numbers. And also you have the option to sort this different ways. You can do by atomic number, name or symbol. Let's say you want to go by name [2]. And you want to find gold but you don't necessarily know where it is in the periodic table. All you have to do is press [alpha] and [(] for the G and then just go down to find gold.

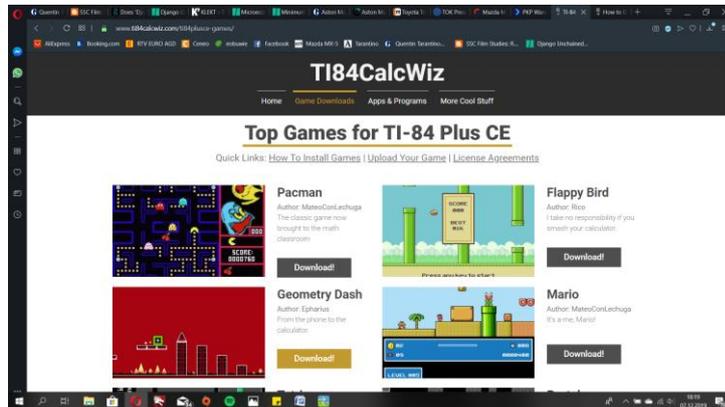
The image shows four sequential screenshots of a terminal-based periodic table application. The first screenshot shows a list of elements from Hydrogen (1) to Fluorine (9). The second screenshot shows a 'SORT ELEMENTS BY:' menu with options: 1: ATOMIC NUMBER, 2: NAME (selected), and 3: SYMBOL. The third screenshot shows the periodic table sorted by name, with Gold (79, Au) highlighted. The fourth screenshot shows the same sorted list, but with Gold (79, Au) highlighted in a darker shade.

6. To see the properties of the element you should just press [enter] on the element (on the list or in the table) and there are plenty of useful information about selected element. In this case for gold.

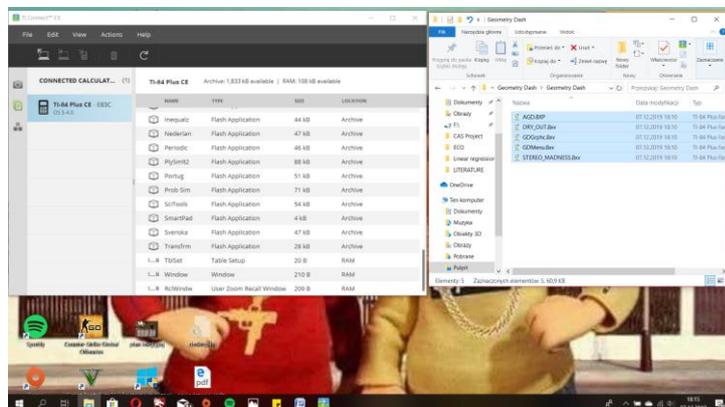
The image shows three sequential screenshots of the 'PERIODIC TABLE APP' displaying the properties of Gold (Au). Each screenshot has a red header with the word 'Gold'. The first screenshot shows basic information: ATOMIC #: 79, SYMBOL: Au, WEIGHT: 196.966569, NEUTRONS: 118, PROTONS: 79, and the electron configuration [Xe] 4f¹⁴ 5d¹⁰ 6s. The second screenshot shows physical and chemical properties: RADIUS: 130, 1ST ION: 890, ELECTRONEG: 2.4, DENSITY: 19.3, MELTING PT: 1064.18, and BOILING PT: 2836. The third screenshot shows the state and discovery: STATE: SOLID, OX STATES: 3 (1), and DISCOVERED: ANCIENT.

Downloading game

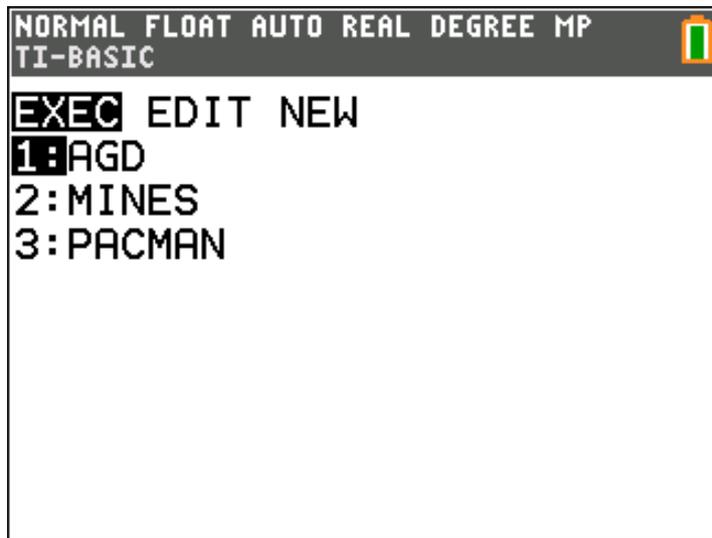
1. Download your favorite game available to play on your calculator (we recommend <https://www.ti84calcwiz.com> page).



2. Drag all downloaded files into your calculator (you need to have TI Connect CE installed).



- Open up your calculator and press [prgm] and choose the program named as your game.



- Enjoy playing games during your math lessons!

