

How to use Linux Terminal as a computer

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Do you like the simplicity of terminals in Linux more than GUI or use? If you need to do some math quickly, you should not use a computer application. You can perform your calculations using a terminal, through the tools you (probably) have installed.

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Calculate with GNU bc

Bc in **GNU bc** stands for 'basic calculator'. This bc program itself originated in Unix in the 1970s. GNU bc is a more advanced and modern version that you can find on your Linux system.

If you don't have GNU bc, use the package manager that your distro uses to install it. This package is simply called **bc**. To start, open the terminal and type **bc** before pressing **Enter**. Type **quit** to exit the program after you're done.

```

desktop@vbpc: ~
File Actions Edit View Help
desktop@vbpc: ~
desktop@vbpc:~$ bc
bc 1.07.1
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006, 2008, 2012-2017 Free Software
This is free software with ABSOLUTELY NO WARRANTY.
For details type 'warranty'.
1 + 1
2
3 * 3
9
(25*2)-1
49
((13*4)-6)*2
92
8-7
1
8 / 2
4
172 / 3.4
50
quit
desktop@vbpc:~$

```

The plus, minus, backslash and asterisk are used for calculations. The first two signs (addition and subtraction) are simple, while backslashes are used instead of division and asterisks represent multiplication.

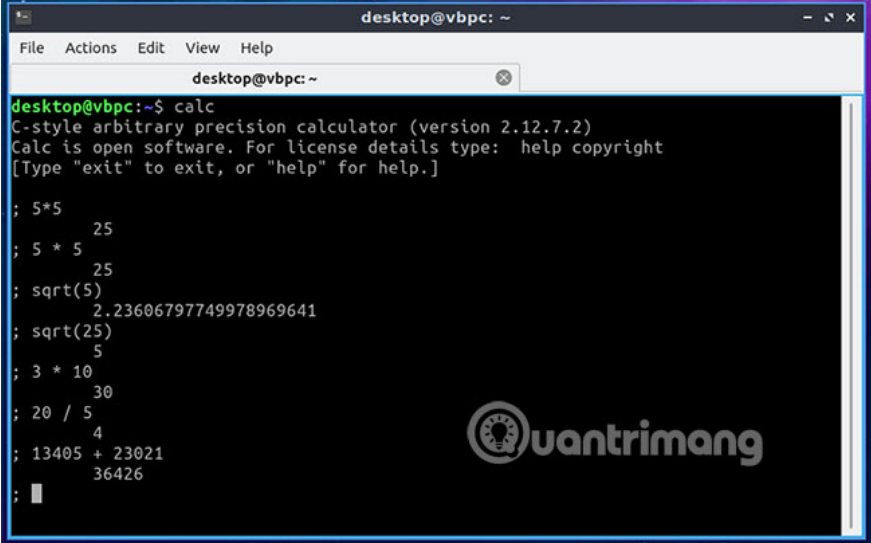
You can also use parentheses, variables, arrays, algebra expressions, etc. Readers can learn more through the GNU user guide at:

https://www.gnu.org/software/bc/manual/html_mono/bc.html

Calculation with Calc

An alternative to `bc` is **calc**, a tool based on another terminal. Like `bc`, `calc` has another old Unix tool that continues to be supported on Linux. The installation package is called **apcalc** on Ubuntu and Debian-based systems but can be found under the name **calc** elsewhere.

To open `calc`, just type `calc` in the terminal and press `Enter`. Like `bc`, you will need to use typical operators. For example: `5 * 5` to represent **5 x 5** calculations.



```
desktop@vbpc: ~  
File Actions Edit View Help  
desktop@vbpc: ~  
desktop@vbpc:~$ calc  
C-style arbitrary precision calculator (version 2.12.7.2)  
Calc is open software. For license details type: help copyright  
[Type "exit" to exit, or "help" for help.]  
  
; 5*5  
    25  
; 5 * 5  
    25  
; sqrt(5)  
    2.23606797749978969641  
; sqrt(25)  
    5  
; 3 * 10  
    30  
; 20 / 5  
    4  
; 13405 + 23021  
    36426  
; |
```

When you're done, press `Enter`. The answer will appear immediately below. When you're done, enter `quit` and press `Enter`.

Use terminal commands directly (Echo and Expr)

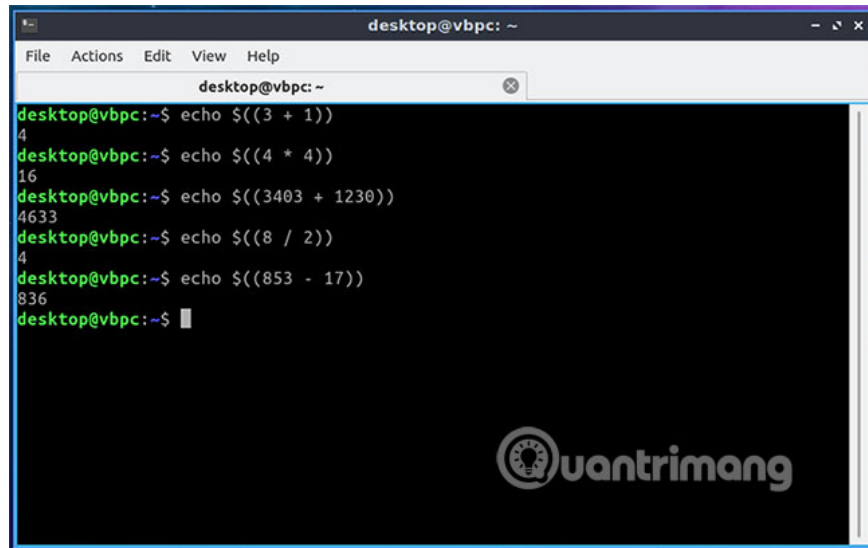
You do not need to have any additional programs or packages to perform basic calculations with terminals in Linux. A typical Bash shell allows you to perform basic calculations using **echo yourself**. For example, you can do this if you plan to use `math` as part of the bash script.

You can also use **expr**, a tool that comes with **coreutils**, found on most Linux and Unix-based systems. `Expr` can also be used in bash scripts, like with `echo`.

To use `echo`, enter the following command in the terminal:

```
echo $( ( 2*2 ) )
```

In which `2 * 2` is the calculation you selected. Press `Enter` and you will get the answer to your calculation.

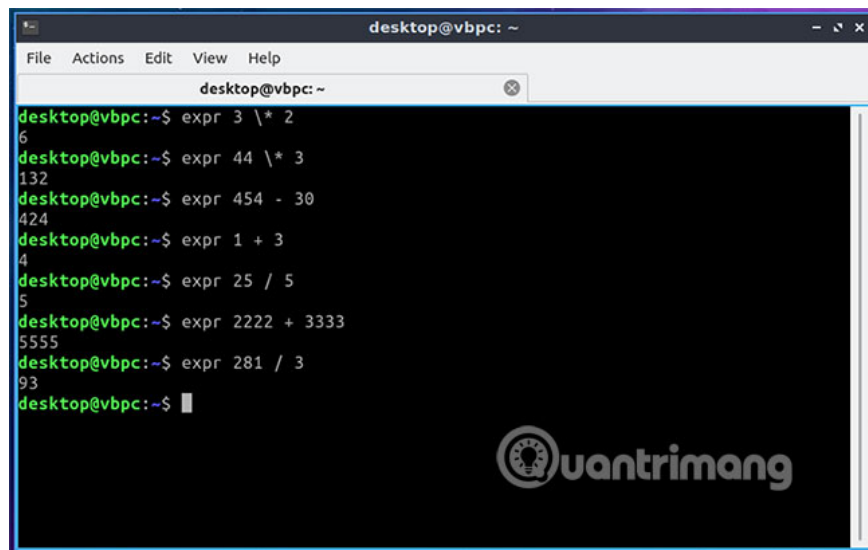


```
desktop@vbpc: ~  
File Actions Edit View Help  
desktop@vbpc: ~  
desktop@vbpc:~$ echo $((3 + 1))  
4  
desktop@vbpc:~$ echo $((4 * 4))  
16  
desktop@vbpc:~$ echo $((3403 + 1230))  
4633  
desktop@vbpc:~$ echo $((8 / 2))  
4  
desktop@vbpc:~$ echo $((853 - 17))  
836  
desktop@vbpc:~$
```

The image shows a terminal window titled 'desktop@vbpc: ~'. The window has a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. The terminal content shows several lines of commands using the 'echo' command with arithmetic expressions in double parentheses. The results are displayed on the following line. At the bottom right, there is a logo for 'uantrimang' which consists of a lightbulb icon inside a circle followed by the text 'uantrimang'.

To use `expr`, enter `expr`, followed by your calculation. Again, this is only applicable to simple calculations (not usable with trigonometry).

For example, `expr 33 * 2` will represent 33 multiplication by 2 (33 x 2). The `\"` backslash before an asterisk is required for multiplication here, but does not apply to other operators.



```
desktop@vbpc: ~  
File Actions Edit View Help  
desktop@vbpc: ~  
desktop@vbpc:~$ expr 3 \\* 2  
6  
desktop@vbpc:~$ expr 44 \\* 3  
132  
desktop@vbpc:~$ expr 454 - 30  
424  
desktop@vbpc:~$ expr 1 + 3  
4  
desktop@vbpc:~$ expr 25 / 5  
5  
desktop@vbpc:~$ expr 2222 + 3333  
5555  
desktop@vbpc:~$ expr 281 / 3  
93  
desktop@vbpc:~$
```

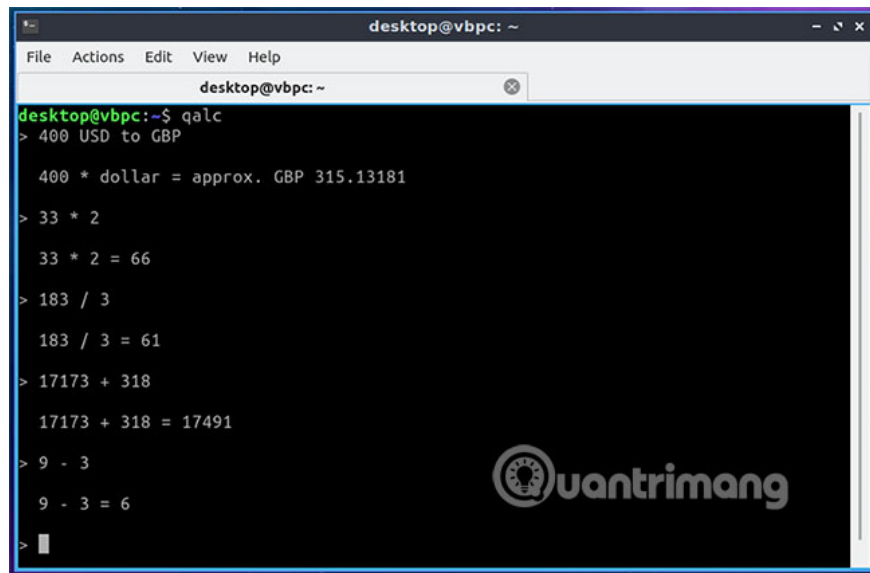
The image shows a terminal window titled 'desktop@vbpc: ~'. The window has a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. The terminal content shows several lines of commands using the 'expr' command for various arithmetic operations. The results are displayed on the following line. At the bottom right, there is a logo for 'uantrimang' which consists of a lightbulb icon inside a circle followed by the text 'uantrimang'.

Echo and `expr` can be used if you only want to perform basic calculations. If you need something more advanced, choose another method listed here.

Calculate with Qalc

If you like an option with a few extra features, like currency conversion, **Qalc** is the right tool for you. Qalc is 'cousin' with Qalculate, a cross-platform computing tool with GUI.

Please use the distribution package manager to install the `qalc` package. Start by typing `qalc` in the terminal and press `Enter` .



```
desktop@vbpc: ~
File Actions Edit View Help
desktop@vbpc: ~
desktop@vbpc:~$ qalc
> 400 USD to GBP
400 * dollar = approx. GBP 315.13181
> 33 * 2
33 * 2 = 66
> 183 / 3
183 / 3 = 61
> 17173 + 318
17173 + 318 = 17491
> 9 - 3
9 - 3 = 6
> |
```

Qalc is the most comprehensive and user-friendly terminal calculation application for Linux users. Qalc will also remember the calculations that have been performed, as well as present the neat answer below.

If you want to make currency conversion, you will need to start with `qalc` and then enter `exrates` to update the previous exchange rate.

Math is not something that is easy to master overnight, but you can eliminate the hassle of fast Linux calculations, using a terminal. Tools like `echo` and `expr`, as well as some popular software like GNU `bc`, make it easy, quick and easy to calculate numbers.

Which Linux calculation tool is easiest for you? Do you particularly like any of these tools? Please share your comments in the comment section below!

Hope you are succesful.

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