

# Bash bc command

- The full form of `bc` is Bash Calculator.
- It is used for performing floating-point mathematical operations. Before you perform any arithmetic operation using `bc` command, make sure you set the value of a built-in variable called `scale`. This variable is used to set the number of decimal places. The default value of the `scale` variable is 0.

## How to use bc command in Bash Shell?

```
variable=`echo "options; expression" | bc`
```

Here, we use backtick to run `bc` command and assign the output to a variable. In options part, we set variables like `scale`. Mathematical operations are performed in the expression part.

## Example: Bash bc command

```
num1=75.5
num2=20
add=`echo "scale=4; $num1+$num2" | bc`
sub=`echo "scale=4; $num1-$num2" | bc`
multi=`echo "scale=4; $num1*$num2" | bc`
div=`echo "scale=4; $num1/$num2" | bc`
echo "Addition of $num1 and $num2 is $add"
echo "Subtraction of $num1 and $num2 is $sub"
echo "Multiplication of $num1 and $num2 is $multi"
echo "Division of $num1 and $num2 is $div"
```

## Output of the above program

```
Addition of 75.5 and 20 is 95.5
Subtraction of 75.5 and 20 is 55.5
Multiplication of 75.5 and 20 is 1510.0
Division of 75.5 and 20 is 3.7750
```