1.
```
$ cp hello.sh sum.sh
$ nano sum.sh
$ ./sum.sh 2 4
$ ./sum.sh 2 4 6

#!/bin/bash
#check if number of arguments is 2, if not - print warning, if yes - proceed
if [ $# -ne 2 ]
then
  echo "Execution: $0  x   y"
  echo "Where x and y are two integers for which sum will be calculated"
else
  sum=`expr $1 + $2 `
  echo "Sum of $1 and $2 is $sum "
fi
```

2.
```
$ cp hello.sh biggest.sh
$ nano biggest.sh
$ ./biggest.sh 5 8 2

#!/bin/bash
num1=$1
num2=$2
num3=$3
if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
then
    echo "$num1 is biggest number"
elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
then
     echo "$num2 is biggest number"
elif [ $num3 -gt $num1 ] && [ $num3 -gt $num2 ]
then
  echo "$num3 is biggest number"
fi
```

3.
```
$ cp biggest.sh biggest1.sh
$ nano biggest1.sh
$ ./biggest.sh 5 8
$ ./biggest.sh 5 8 2

#!/bin/bash
if [ $# -ne 3 ]
then
  echo "Use $0: number1 number2 number3 "
else
 num1=$1
 num2=$2
 num3=$3
```

```bash
    if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
    then
        echo "$num1 is biggest number"
    elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
    then
        echo "$num2 is biggest number"
    elif [ $num3 -gt $num1 ] && [ $num3 -gt $num2 ]
    then
       echo "$num3 is biggest number"
     fi
    fi
```

4.  ```
    $ cp biggest1.sh biggest2.sh
    $ nano biggest2.sh
    $ ./biggest.sh 2 2 2
    $ ./biggest.sh a b c
    ```

    ```bash
    #!/bin/bash
    if [ $# -ne 3 ]
    then
      echo "Use $0: number1 number2 number3 "
    else
      num1=$1
      num2=$2
      num3=$3
      if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
      then
          echo "$num1 is biggest number"
      elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
      then
          echo "$num2 is biggest number"
      elif [ $num3 -gt $num1 ] && [ $num3 -gt $num2 ]
      then
         echo "$num3 is biggest number"
    #what if you give the same number 3 times???
      elif [ $1 -eq $2 ] && [ $1 -eq $3 ] && [ $2 -eq $3 ]
      then
          echo "All the three numbers are equal"
    #what if 3 arguments that are not really numbers???
      else
      echo "I can not figure out which number is bigger"
      fi
    fi
    ```

5.  ```
    $ cp hello.sh math-operations.sh
    $ nano  math-operations.sh
    $ ./math-operations.sh  2 + 3
    ```

$./math-operations.sh 4 - 2
$ ./math-operations.sh 10 x 2
$ ./math-operations.sh 10 / 2
But be careful
$ ./math-operations.sh 10 / 3
$ ./math-operations.sh 10 v 2
$ ./math-operations.sh 10 + 2 - 4


```bash
#!/bin/bash
#check if all the arguments are provided: 2 numbers and operation
if test $# = 3
then
     case $2 in
      #sum
      +) let result=$1+$3;;
      #subtract
      -) let result=$1-$3;;
      #multiply
      #case insensitive
      x|X) let result=$1*$3;;
      #divide
      /) let result=$1/$3;;
      #unknown operator
      *) echo Warning - $2 invalid operator, only +,-,x,/ operator allowed
        exit;;
     esac
     echo $1 $2 $3 = $result
else
     echo "Syntax: $0   value1  operator value2"
     echo "where, value1 and value2 are numeric values"
     echo "operator can be +,-,x,/"
fi
```