

1. Sum of Odd number upto n

```
#!/bin/sh

echo "enter limit of sum : "
read lim

num=1
sum=0

while [ $num -le $lim ]
do
    sum=`expr $sum + $num`
    num=`expr $num + 2`
done
echo $sum
```

```
bmsce@bmsce-Precision-T1700:~/dev$ sh odd_sum.sh
enter limit of sum :
5
9
bmsce@bmsce-Precision-T1700:~/dev$
```

2. Factorial of a Num

```
#!/bin/sh

echo "Enter number to find factorial of"
read num
fact=1

while [ $num -gt 1 ]
do
    fact=`echo "$fact * $num" | bc`
    num=$((num-1))
done
echo $fact

~
```

```
bmsce@bmsce-Precision-T1700:~/dev$ sh fact.sh
Enter number to find factorial of
10
3628800
bmsce@bmsce-Precision-T1700:~/dev$
```

3, Convert Farenheit to celsius

```
#!/bin/sh

echo "enter temp in Farenheit"
read f

res=$((f-32)*5/9))
echo $res
~
~

bmsce@bmsce-Precision-T1700:~/dev$ sh temp.sh
enter temp in Farenheit
130
54
bmsce@bmsce-Precision-T1700:~/dev$ sh temp.sh
enter temp in Farenheit
98
36
bmsce@bmsce-Precision-T1700:~/dev$
```

4. Gross salary calculator

```
#!/bin/sh
echo "Enter basic salary"
read basic

da=`echo "$basic * 0.1" | bc`
hra=`echo "$basic * 0.2" | bc`
gs=`echo "$basic + $da + $hra" | bc`
echo "gross salary is $gs"
~
~

bmsce@bmsce-Precision-T1700:~/dev$ sh gross.sh
Enter basic salary
10000
gross salary is 13000.0
bmsce@bmsce-Precision-T1700:~/dev$
```

5. Sum of n natural numbers

```
#!/bin/sh

echo "enter limit of sum :"
read num

sum=0

while [ $num -gt 0 ]
do
    sum=`expr $sum + $num`
    num=`expr $num - 1`
done
echo $sum
~
```

```
bmsce@bmsce-Precision-T1700:~/dev$ sh natural_sum.sh
enter limit of sum :
10
55
bmsce@bmsce-Precision-T1700:~/dev$
```

6. Arithmetic operations using switch case:

```
#!/bin/sh

echo "Enter two numbers"
read a b

echo "Enter choice 1)Addition\n2)Subtraction\n3)Multiplication\n4)Division"
read ch

case $ch in
    1)res=`echo "$a + $b" | bc`;;
    2)res=`echo "$a - $b" | bc`;;
    3)res=`echo "$a * $b" | bc`;;
    4)res=`echo "$a / $b" | bc`;;
    *)echo "invalid";;
esac

echo "Result = $res"
~
```

```
$ sh arithmetic.sh
Enter two numbers
2 3
Enter choice 1) Addition
2) Subtraction
3) Multiplication
4) Division
3
Result = 6
$ sh arithmetic.sh
```