1. Shell script to find the area of a circle

```
echo "Enter the radius : "
read r
echo "Area of the Circle is"
echo "3.14 * $r * $r" | bc
```

2. Linux shell program/script to find whether a given number is odd or even

```
echo "Enter a number : "
read n
rem=$(( $n % 2 ))
if [ $rem -eq 0 ]
then
echo "$n is even number"
else
echo "$n is odd number"
fi
```

3. Linux shell program/script to find greatest of three numbers

```
echo "Enter three Integers:"
read a b c
if [ $a -gt $b -a $a -gt $c ]
then
echo "$a is Greatest"
elif [ $b -gt $c -a $b -gt $a ]
then
echo "$b is Greatest"
else
echo "$c is Greatest!"
fi
```

4. Shell script for calculator

```
sum=0
i="y"
echo "Enter first number :"
read n1
echo "Enter second number :"
read n2
while [ $i = "y" ]
do
echo "1.Addition"
echo "2.Subtraction"
```

```
echo "3.Multiplication"
echo "4.Division"
echo "Enter your choice"
read ch
case $ch in
1)sum=`expr $n1 + $n2`
echo "Sum ="$sum;;
2)sub=`expr $n1 - $n2`
echo "Sub = "$sub;;
3)mul=`expr $n1 \* $n2`
echo "Mul = "$mul;;
4)div=`echo $n1 / $n2 | bc -l`
echo "Div = "$div;;
*)echo "Invalid choice";;
esac
echo "Do u want to continue ?"
read i
if [ $i != "y" ]
then
exit
fi
done
```

5. Aim: An employee Basic Pay is input through keyboard where DA is 40% of basic pay and HRA is 20% of basic pay. Write a shell script to calculate gross salary, Gross Salary =Basic Pay + DA + HRA

```
#!/bin/bash
echo "enter the basic salary:"
read basal
grosal=$( echo "$basal+((40/100)*$basal)+((20/100)*$basal)" | bc -l)
echo "The gross salary : $grosal"
```

6. Aim: Write a shell script to reverse a string and check whether a given string is palindrome or not

```
echo Enter the string
read s
echo $s>temp
rvs="$(rev temp)"
```

```
if [ $s = $rvs ]
then
echo "it is palindrome"
else
echo " it is not a Palindrome"
fi
```

7. Write a shell script to count the number of lines, words and characters of an input file

```bash
#!/bin/bash
echo Enter the filename
read file
c=`cat $file | wc -c`
w=`cat $file | wc -w`
l=`grep -c "." $file`
echo Number of characters in $file is $c
echo Number of words in $file is $w
echo Number of lines in $file is $l
```

8. Write a shell script to find sum of all digits from a given number

```bash
#!/bin/bash
echo "Enter a Number:"
read n
temp=$n
sd=0
sum=0
while [ $n -gt 0 ]
do
sd=$(( $n % 10 ))
n=$(( $n / 10 ))
sum=$(( $sum + $sd ))
done
echo "Sum is $sum"
```

9.