

Q 1 Print the Pattern \*

```

*
* *
* * *
* * * *
* * * * *

```

```

for ((i=1; i<=5; i++))
do
for ((j=1; j<=i; j++))
do
printf "*"
done
printf "\n"
done

```

Q 2 Print the Pattern

```

* 1
1 2
1 2 3
1 2 3 4

```

```

for ((i=1; i<=4; i++))
do
for ((j=1; j<=i; j++))
do
printf "%i"
done
printf "\n"
done

```

Q 3 Print the pattern

```

      *
     **
    ***
   ****
  *****

```

```

for ((j=5; j>=1; j--))
do

```

```

  for (j=1; j<=5; j++)
  do

```

```

    if [ $j -ge $i ]
    then

```

```

      printf "*"

```

```

    else

```

```

      printf " "

```

```

    done
  fi

```

```

done

```

Q 4 Draw a Pattern.

```
      x
     x x x
    x x x x x
   x x x x x x x
```

```
for (( i=1; i<=4; i++ ))
```

```
do
```

```
  for (( j=1; j<=7; j++ ))
```

```
  do printf ".\n" [ [ $j -gt $(4-$i) ] && [ $j -lt $(4+$i) ] ]
```

```
  if [ [ $j -gt $(4-$i) ] ] && [ [ $j -lt $(4+$i) ] ]
```

```
  then
```

```
    print "x"
```

```
  else
```

```
    print " "
```

```
  fi
```

```
done
```

```
done.
```

Q 5 Wap to calculate factorial.

```
fact=1
```

```
echo "Enter a number"
```

```
read n.
```

```
for (( i=1; i<=n; i++ ))
```

```
do
```

```
  fact=$((fact*i))
```

```
done
```

```
echo factorial is $fact.
```

Output :- Enter a number  
3  
factorial is 6.

Q 6

Wap to check a number is prime or not.

```

flag = 0
echo "Enter a number greater than 1"
read n
for (( i=2; i<n; i++ ))
do
    if [[ $((n % i)) == 0 ]]
    then
        flag = 1
        break
    fi
done
if [[ $flag == 1 ]]
then
    echo number is not prime.
else
    echo number is prime.
fi

```

Q 7

Wap to sum all digit in a number

```

echo "Enter a number"
read n
sum = 0
while [[ n -gt 0 ]]
do
    x = $((n % 10))
    sum = $((sum + x))
    n = $((n / 10))
done
echo sum is $sum

```

||

|| 1

Output

Enter a number greater than 1  
4  
number is not prime.

Output

Enter a number.  
1234.  
Sum is 10.

Q 8. Wap to sum even number

```
echo "Enter a number"
read n.
sum=0
while [[ n -gt 0 ]]
do
    if [[ $(($n%2)) -eq 0 ]]
    then
        sum=$((sum+n))
    fi
    n=$((n-1))
done.
echo sum is $sum.
```

Q 9 WAP to check leap year

```
echo "Enter a number"
read n.
if [[ $(($n%100)) != 0 && $(($n%400)) == 0 && $(($n%4)) == 0 ]]
then
    echo year is leap year
else
    echo year is not leap year.
```

Output : Enter a number  
4.  
Sum is 106.

Output :- Enter a number  
2020  
Year is leap year.



Q 10 Wap to find greater number among 3 number.

```

• echo "Enter first number"
read a
echo "Enter second number"
read read b
echo "Enter third number"
read c
    
```

```

if [[ $a > $b && $a > $c ]]
then
    
```

```

        echo a is greater
    elif [[ $b > $c ]]
    then
    
```

```

        echo b is greater
    else
    
```

```

        echo c is greater
    fi
    
```

Q 11 Wap to find profit / Loss.

```

echo "Enter at cost Price"
    
```

```

read cp
    
```

```

echo "Enter selling Price"
    
```

```

read sp
    
```

```

if [[ $cp > $sp ]] then
    
```

```

then
    
```

```

        echo Loss
    
```

```

else
    
```

```

        echo Profit
    
```

```

fi
    
```

Output :- Enter first number  
3  
Enter second number  
2  
Enter third number  
1.  
b is greater

Output Enter costPrice  
4  
Enter sellingPrice  
2  
Loss.

Q 12. WAP to compare two string.

```

echo "Enter first string"
read s1
echo "Enter second string"
read s2
if [[ $s1 == $s2 ]]
then
    echo equal.
else
    echo unequal
fi

```

Q 13 WAP to print table.

```

echo "Enter a number"
read n
for (( i=1; i<=10; i++ ))
do
    echo $((n*i))
done.

```

Q 14 WAP to find greater between two no's

```

echo "Enter 1st no and second number"
read a
read b
if [[ $a > $b ]]
then
    echo a is greater.
else
    echo b is greater.
fi

```

Output :- Enter first String.  
xyz  
Enter Second String  
xzy  
inequal.

Output :- Enter a number  
2  
2  
4  
6  
8  
10  
12  
14  
16  
18  
20

Output :- Enter 1<sup>st</sup> & 2<sup>nd</sup> no's  
2  
3  
b is greater.