

Correct the following programs using while loop

1.

Write a program that inputs an integer and displays the sum of its digits For example the program should display 9 if the user enters 135,

```
#include<iostream h>
```

```
#includesconio.h>
```

```
Void main()
```

```
clrscr().
```

```
int x, a, r, sum=0;
```

```
Cout<<"Enter an integer
```

```
Cin>>X
```

```
while (x !=0)
```

```
r=x % 10;
```

```
if (r == 0)
```

```
Sum SumtX.
```

```
else
```

```
Sum Sumr.
```

```
X=X/10;
```

```
Output:
```

```
Enter an integer: 512
```

```
The sum of digits of 512 =8
```

```
Cout<<"The sum of digits of "ssass="sssum,
```

```
getch().
```

```
oks pk
```

2.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int c, sum;
```

```
clrscr();
```

```
C=1;
```

```
sum =0;
```

```
do
```

```
{cout<<c<<endl;
```

```
sum = sum + C;
```

```
c=c+1;
```

```
cout<<"Sum is "<<sum;
```

```
getch();
```

```
}
```

3.

Write a program that displays first five numbers' and their sum using whileloop.

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
int main()
```

```
{
```

```
int sum=0;
```

```
int i=1;
```

```
while(i<=5)
```

```
{cout<<i<<endl;
```

```
sum=sum+i;
```

```
i++;
```

```
cout<<"Sum is: "<<sum<<endl;
```

```
getch();
```

4.

Write a program that inputs a number from
umber using while loop.

```
#include <iostream.h>
#include <conio.h>
void main()
{
int n, c,
clrscr().
cout<<"Enter a number:"
Cin>>n,
while(c <= 10)gO
cout<<n<<"*"<<c<<" ="<<n*c<<end,
c=c+1,
```

Output:

```
getch):O Enter a number: 3
3*1=3e
```

5.

Write a program that inputs a number from the user and displays the factorial of the
number using while loop.

```
#include <iostream h>
include <conio.h>
vOid main()
long intn, c, f:
clrscr():
Ca1:
cout<<"Enter a number
Cin>>n
```

```
while(c n)
C=C+ 1.
cout<<"Factorial of "<<n<< is "<<f;
getch():
Output:
Start
Input n
Yes
```

6.

Write a program that displays the degree-to-radian tabel using while loop.

```
#include <iostream.h>
Free
#includeconio.h
#include siomanip.h
const double PI 3.141593:
void main()
clrscr()
int degrees=0:
double
radians.
cout << "Degrees to Radians n"
while (degrees 360)
radians # degrees P/180
Output:O
getch():
```

Degree to Radians

0

10

20

360

cout << setw(6) << degrees << setw(10) << radians << endl:

degrees + 10

0

0.174533

0.349066

6.283186

cout.setf(ios::fixed):

cout.precision(6):

7.

Write a program that displays the sum of the following series using while loop.

$1 + 1/2 + 1/4 + 1/6 + \dots + 1/100$

```
#include <iostream.h>
```

```
#include <conio.h>
```

```
void main()
```

```
float c ,
```

```
clrscr():
```

```
c=2.0;
```

```
r=10;
```

```
while(c <= 100)
```

```
rr1.0/c:
```

```
C#C+2:
```

```
cout<<"Result is "<<
```

```
getch):
```

Flowchart:

Start

C=20

f= 10

is

C<= 100

yes

r=+LO

8.

Write a program that inputs a positive number. It then displays the sum of all odd numbers and the sum of all even numbers from 1 to the number entered by the user.

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
int n,oddsum=0,evensum=0;
```

```
clrscr();
```

```
COut<<"Enter a positive number:"
```

```
Cin>>n,
```

```
while (n>0)
```

```
)
```

```
if(n%2==0)
```

```
evensum=evensum+n;
```

```
else
```

```
oddsum=oddsum+n;
```

```
Output:
```

```
getch();
```

```
Enter a positive number: 5
```

```
The sum of even digits is: 6
```

The sum of odd digits is:9

```
COút<<"The sum of even digits is:" <<evensumn<<endl;
```

```
COut<<"The sum of odd digits is:" <<oddsum;
```

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