**Question 1**:

**Cout all the number ,which the total of the every number is 9 and can be divided by 5**

**Program code**

**#include <iostream>**

**using namespace std;**

**int main()**

**{**

**int a,b,c,d,e,sum,n;sum=0;**

**for (a=1;a<=9;a++)**

**for (b=0;b<=9;b++)**

**for (c=0;c<=9;c++)**

**for (d=0;d<=9;d++)**

**for (e=1;e<=9;e++)**

**{ n=a\*10000+b\*1000+c\*100+d\*10+e;**

**if (n%5==0 && (a+b+c+d+e)==9)**

**{**

**sum=sum+1;**

**}**

**}**

**cout<<sum<<endl;**

**return 0;**

**}**

**Program analysis**:

Using 5 vars to represent the number ;

Using loop statement to check every number.

**Program Result:**

**Question 2**:

Calculate the s=1+(1+2)+(1+2+3)+…….+(1+2+3+….+n)

**Program code**

#include <iostream>

using namespace std;

int main()

{

int s,i,j,n;

s=0;

cin>>n;

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

{

for(j=1;j<=i;j++)

s=s+j;

}

cout<<s<<endl;

return 0;

}

**Program analysis**:

Using two loop statements to calculate the sum

**Program Result:**

**Question 3**:

Calculate 4!+6!+8!

**Program code**

#include <iostream>

using namespace std;

int main()

{

int s,i,j,n;

s=0;

for (i=4;i<=8;i=i+2)

{

n=1;

for(j=1;j<=i;j++)

n=n\*j;

s=s+n;

}

cout<<s<<endl;

return 0;

}

**Program analysis**:

Using 2 loop statement to calculate the n!

**Program Result:**

**Question 4**:

Cout all the perfect number between 1 and 1000

**Program code**

#include <iostream>

using namespace std;

bool check(int n);

int main()

{

int i;

for (i=2;i<=1000;i++)

{

if (check(i)==true)

cout<<i<<endl;

}

return 0;

}

bool check(int n)

{

int sum,i;sum=0;

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

{

if (n%i==0)

sum=sum+i;

}

if (sum==n)

return true;

else return false;

}

**Program analysis**:

1. using a function to check whether the number is a perfect number .

**using loop statement to calculate the sum of the** factor

**Program Result:**

**Question 5**:

Calculate the pi

**Program code**

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

int i;

double pi;

pi=2;

for (i=1;i<=20000;i++)

{

pi=pi\*(2\*i)\*(2\*i)\*1.0/((2\*i-1)\*(2\*i+1));

}

cout<<fixed<<setprecision(5)<<pi<<endl;

cout<<"The n is 20000"<<endl;

return 0;

}

**Program analysis**:

1. using loop statement to calculate the pi
2. using fixed<<setprecision(5) to control the number behind the point

**Program Result:**