```cpp
#include<iostream>

using namespace std;

int main()

{

        //TASK 1

//      int num[10];

//      for(int i=0;i<10;++i)

//      {

//      cout<<"enter integer "<<i<<endl;

//      cin>>num[i];

//      }

//      for(int n=0;n<10;++n)

//      {

//      cout<<" "<<num[n];

//      }

return 0;

}

        //TASK 2

#include<iostream>

using namespace std;

int main()

{

//      int foo[4],product=1,sum=0;

//      foo[0]=1,foo[1]=2;foo[2]=3;foo[3]=4;foo[4]=5;

//      for(int i=0;i<=4;i++)

//      {

//      sum=sum+foo[i];

//      product=product*foo[i];

//      }

//      cout<<"the sum is :"<<sum<<endl;

//      cout<<"the product is :"<<product<<endl;
```

```cpp
return 0;

}


        //TASK 3
#include<iostream>
using namespace std;
int main()
{
int length,half;
        length=5;
        char diamond[length];
        half=length/2;


        for(int i=0;i<=length;i++)
        diamond[i] =' ';


        for(int i=0;i<=half;i++)
        {


                for(int n=0;n<=length;n++)
                {


                diamond[half-i] = '*';
                diamond[half+i] ='*';
                cout<<diamond[n];
                }
                cout<<endl;
}


        for(int i=0;i<=length;i++)
```

```
        {

                for(int n=0;n<=length;n++)

                {

                diamond[i] =' ';

                diamond[length-i-1] =' ';

                cout<<diamond[n];       }


                cout<<endl;

}

return 0;

}
```

The output for task 1 is:

```
enter integer 0
1
enter integer 1
2
enter integer 2
3
enter integer 3
4
enter integer 4
5
enter integer 5
6
enter integer 6
7
enter integer 7
8
enter integer 8
9
enter integer 9
10
 1 2 3 4 5 6 7 8 9 10
------------------------------
Process exited after 7.207 seconds with return value 0
Press any key to continue . . .
```

The output for task 2 is:

```
the sum is :15
the product is :120

------------------------------
Process exited after 1.976 seconds with return value 0
Press any key to continue . . .
```

The output for task 3 is:

```
    *
   ***
  *****
   ***
    *




------------------------------
Process exited after 1.19 seconds with return value 0
Press any key to continue . . .
```