Name: \_\_\_\_\_\_\_\_\_\_\_\_\_ Student#: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Read the programs as follows, and please write down the output of them：(60 credits)**
2. What’s the output of the following program? (20 pts)

#include <iostream>

using namespace std;

int main()

{

int x = 1;

for (int i = 0; i++ < 7; ++i)

{

cout << i << endl;

if (i % 3 == 0)

cout << i << endl;

}

}

1. What’s the output of the following program? (20 pts)

#include <iostream>

using namespace std;

void main()

{

int m=0;

int n;

cin>>n;

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

{

if(!(n%i)) m+=i;

}

if(m!=n)

cout<<"Not"<<endl;

else

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

{

if(!(n%i)) cout<<i<<" ";

}

}

输入：

8 6

1. What’s the output of the following program? (20 pts)

#include<iostream>

using namespace std;

int main()

{

double d = 4;

int count = 0;

while (d > 0.2)

{

count++;

for (int i = 0; i < count; i++)

{

cout << '#';

}

cout << (d/=2) << endl;

}

cout << "count=" << count << endl;

return 0;

}

1. **To write and test programs according to the requirements（40 credits）**
2. Write a program to print a matrix according to a given integer. (10pts)

**Sample:**

**Input:**

6

**Output:**

666666

6\*\*\*\*6

6\*\*\*\*6

6\*\*\*\*6

6\*\*\*\*6

666666

1. Write a program which asks for 3 integers from the user. And the program can estimate whether the 3 integers can be used as sides to form a right triangle（直角三角形）. Part of the main function may as follow. (15pts)

#include <iostream>

using namespace std;

int main()

{

int s1, s2, s3;

//Prompt the user to enter 3 integers, and input the integers

//Estimate whether the 3 sides can form a right triangle. Present the result "Right triangle" or "NOT right triangle"

return 0;

}

1. Suppose you have some money in your bank account and the annual interest rate（年利率） is 5%. Write a program to calculate how many years it will take for your money to be doubled (at least). Type in the amount of money at the beginning, and output the number of years as well as the money in your account by then. (15 pts)