**For Loops Homework**

1. Write a for loop to sum all the integers between 1 and 100.

Int n = 0, sum = 0;

for(n = 0; n < 100; n++)

{

sum += n;

}

1. In 1784, Carl Gauss solved problem #1 in seconds by noticing that:

1 + 99 = 100, 2 + 98 = 100, 3 + 97 = 100… (he was 7 years old at the time.)

Write a for loop to compute the sum in #1 using approximately half the number of executions of the for loop in #1.

1. Write a program that outputs the sequence of numbers: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121

Int x ;

For (x = 1; x <12; x++)

{

System.out.print(x\*x);

}

1. Write a program for problem #3 that does not use the multiplication operator (\*).

(Hint: look at the difference between each number in the sequence of squares…)

Int x = 0, out = 0;

System.out.print(x);

For (x = 1; x <12; x++)

{

If ( x==1 )

{

out = x;

System.out.print(out);

}

Else

{

System.out.print(out +

}

}

1. Write nested for loops to produce this output:

1

2

3

4

5

1. The first 12 Fibonacci numbers are: 1 1 2 3 5 8 13 21 34 55 89 144

What is the pattern here?

Write a program to compute the first 12 Fibonacci numbers.

1. Write nested for loops to produce the following output:

000111222333444555666777888999

000111222333444555666777888999

000111222333444555666777888999

1. Write nested for loops to produce the following output:

1111111111

22222222

333333

4444

55

1. Write nested for loops to produce the following output:

$

$$$

$$$$$

$$$$$$$

$$$$$$$$$