CSCI 161 – Homework #3

Due: Friday, February 16th @ 11:59PM

1. [10pts] What is the output of the following for-loop:

```
int total = 25;
for (int number = 1; number <= (total / 2); number++) {
    total = total - number;
    System.out.println(total + " " + number);
}
```

2. [10pt] Complete the code for the following for-loop so that it prints out the following numbers **on a single line**

```
for (int i = 0; i <= 6; i++) {
    // your code here
}

// Output should be: -4 14 32 50 68 86
```

3. [10pt] What is the output of the following sequence of loops?

```
for (int i = 1; i <= 10; i++) {
    for (int j = 1; j <= 10 – i; j++) {
        System.out.print(" ");
    }
    for (int j = 1; j <= 2 * i – 1; j++) {
        System.out.print("*");
    }
    System.out.println();
}
```

4. [10pt] Write nested for-loops to produce the following output

```
    1
   22
  333
 4444
55555
```

5. [10pt] Given a variable, count, that will take on the values 1, 2, 3, 4, and so on. Formulate expressions in terms of count that will yield different sequences. For example, to get the sequence 2, 4, 6, 8, ..., you would use the expression (2 * count). Fill in the following table, indicating an expression that will generate each sequence.

0, 2, 4, 6, 8, 10, ...	
4, 18, 34, 49, 64, 79, ...	
30, 20, 10, 0, -10, -20, ...	
-7, -3, 1, 5, 9, 13	
97, 94, 91, 88, 85, 82	