Fall 2011 COP 3223 Section 3 Exam 2 Answer Sheet

Last Name: _____ , First Name: _____

Note: You may declare extra variables for any of the following questions.

Note: Please do NOT put ANY printfs or scanfs in any of these functions. I will give you negative points if you do. I promise!

1) (10 pts) Complete the function below so that it returns the sum $1^3 + 2^3 + 3^3 + \ldots + n^3$. You may assume that n will be in between 1 and 300.

```
int sumcubes(int n) {









}
```

2) (10 pts) The function below takes in an array and its length. Complete the function below so that it returns the **INDEX** where the maximum value in the input array is stored. You may assume that this index is unique. Negative numbers may be in the array.

```
int getIndexOfMax(int array[], int length) {









}
```

3) (10 pts) The function below takes in a 10 x 10 character array and a char c. Complete the function below so that it returns the number of times the character c appears in the array.

```
int numTimesAppear(char grid[][10], char c) {









}
```

4) (10 pts) Consider the problem of finding the biggest change in consecutive terms in a sequence of numbers. For example, in the sequence 3, 8, 2, 4, 5, 5, 6, 10, 8, the biggest change in a consecutive pair is the change of six between 8 and 2. Complete the function below so that it returns the biggest change in the sequence passed into the function. The function takes in the array that stored the sequence and the length of the array. You are guaranteed that length > 1.

```
#include <math.h>

int biggestChange(int seq[], int length) {









}
```