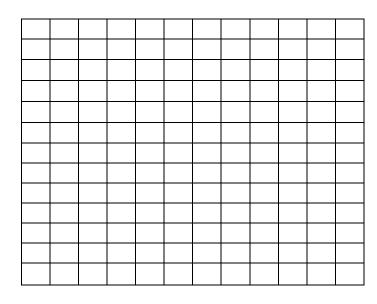
CS 1713 Intro to Programming II

1. (3pt) What will be the output of the following program making several function calls? Also show how the values of each variable change in memory

```
#include <stdio.h>
int myfunc(int a);
int main()
  int x = 4, y;
 y = myfunc(x) + myfunc(x+3);
 printf("y is %d \n",y);
 y = myfunc(myfunc(15));
 printf("y is %d \n",y);
  return 0;
}
int myfunc( int a )
  int b;
 printf("a is %d \n", a);
 b = a / 3;
 printf("b is %d \n", b);
  return b;
}
```



Suppose this is the screen.

| Values of x | : | | |
|--------------|---|--|--|
| Values of y: | | | |
| | | | |
| | | | |
| | | | |
| Values of a: | | | |
| Values of b: | | | |
| | | | |
| | | | |

2. (2pt) Write a function that takes two double parameters w and h, and returns a double value known as Body Mass Index (BMI), which is computed by the formula

$$BMI = \frac{w}{h^2}$$

where w is the weight in kilogram and h is the height in meters.

3. (5pt) Write just a function that takes n as a integer parameter and computes the following sum and returns the result to the caller.

$$sum = 1 \binom{n}{0} + 2 \binom{n}{1} + 3 \binom{n}{2} + \dots + (n+1) \binom{n}{n}$$

Assume that the int fact(int n); and int select(int n, int k); functions that we implemented in class are available and can be used in your solution (if you need them). You do not need to implement them again.

```
int ComputeSum(int n)
{
```