

CS111  
HW 7

1. What is the output from the program at lines a through e

```
#include <iostream>
using namespace std;

int fun(int &x, int y)
{
    x = y + 1;
    y = x + 1;
    cout << x << y << endl;
    return x * y;
}

int main()
{
    int x = 2, y = 0;
    fun(x, 8); //a
    fun(x, y); // b
    fun(y, x); //c
    fun(y, x); //d
    cout << fun(x, 3) << endl; //e
    return 0;
}
```

2. Write a function called sort that sorts three integer parameters into decreasing order.

For example, a program that uses the function sort follows.

```
int main() {
    int a = 2, b = 7, c = 1;
    sort(a, b, c);
    cout << a << b << c << endl; // prints 721
    return 0;
}
```

3. Write a recursive function to compute exponentials

Ex:

Base: 2

Exp: 3

Ans: 8

Base: 3.5

Exp: 2

Ans: 12.25

Base: 2

Exp: 10

Ans: 1024

4. Write a function called useRecursion that returns the sum of the first two digits in a positive number.

If there is only one digit, that digit is returned.

For example, a program that uses the function useRecursion follows.

```
int main() {
    cout << useRecursion(567982) << endl; // prints 11
    cout << useRecursion(107982) << endl; // prints 1
    cout << useRecursion(7) << endl; // prints 7
    return 0;
}
```