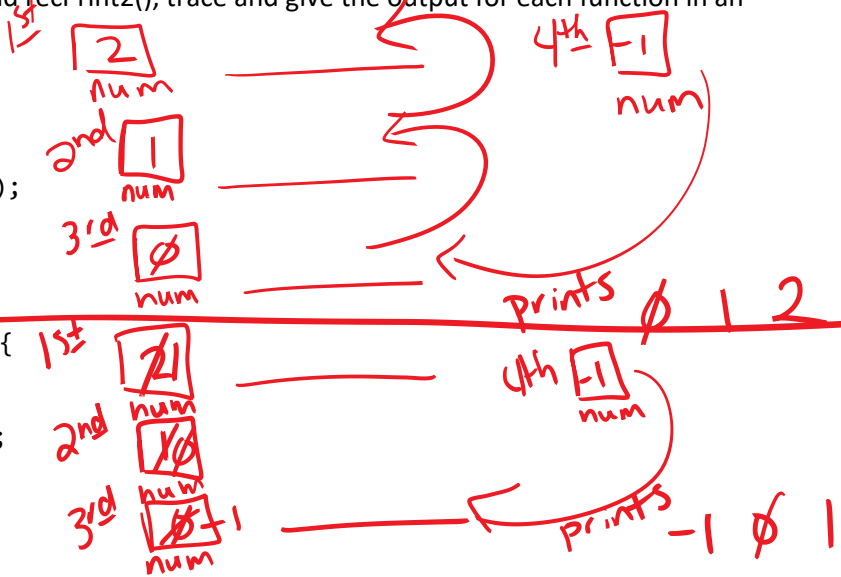CS 161 Recitation

Quiz #8

(4pts) If 2 is passed into recPrint() and recPrint2(), trace and give the output for each function in an otherwise complete program:

```
void recPrint(int num){
        if (num < 0)
                return;
        recPrint(num - 1);
        cout << num;
}
```

1st `2` num
2nd `1` num
3rd `0` num
4th `-1` num

prints ∅ 1 2

```
void recPrint2(int num){
        if (num < 0)
                return;
        recPrint2(--num);
        cout << num;
}
```

1st `2 1` num
2nd `1 0` num
3rd `0 +1` num
4th `-1` num

prints -1 ∅ 1

(2 pts) Answer the following questions.

- Where is static memory located? **stack (1pt)**

- Where is dynamic memory located? **heap (1pt)**

(2 pts) Answer the following questions.

- If you want to get to the first value in an array, what index number are you accessing? **0 (1pt)**

- If 'len' is equal to the current size of your array, what is the index of the last value? **len-1 (1pt)**

(2 pts) Declare an array of 17 chars on the stack:

char my_array[17];

Extra Credit: (2 pt) Allocate and deallocate a 1D array of size **x** on the heap without any memory leaks.

int *a = new int [x]; (1pt) need pointer creation & assignment to get pt.

delete [ ] a; (1pt) need delete and [ ] to get pt.