

## Lab 3: Dynamic Memory Answer Sheet

Due: Friday 2/4 at 11:59 PM

Type your answers on this sheet making sure to list the question numbers.

### Part 1

7. `int x = 0;`

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10. `static int x = 0;`

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11. using static, the program remembered the value for x

12. if you remove static, the value for x resets each time the function is called

## Part 2

```
int* ptr; //declare a pointer capable of pointing at an int
ptr = new int; //make the pointer point at a new integer
cout << ptr << endl; //print out the address of the new integer
cout << &ptr << endl; //print out the address of that pointer
```

16. address of the new integer: 0xf36fd0

17. address of the pointer: 0x61feb0

20. first line: 2402 is stored at 0x10f6fd0

last line: 2411 is stored at 0x10f6fd0

22. penultimate line: 0 is stored at 0x896ff4

last line: -1 is stored at 0x896ff8

## Part 3

28. 5 numbers

41

18467

6334

26500

19169

Sorry, no room left :(

30. 5 random numbers, then resize, then the remaining 20 numbers

41

18467

6334

26500

19169

RESIZED

15724

11478

29358

26962

24464

5705

28145

23281

16827

9961

491

2995

11942

4827

5436

32391

14604

3902

153

292

32. resized, then 25 random numbers (the third one being 0)

RESIZED

41

18467

0

26500

19169

15724

11478

29358

26962

24464

5705

28145

23281

16827

9961

491

2995

11942

4827

5436

32391

14604

3902

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