

Exercise # 3

(11-10-2000)

Exercise 1

Show precisely the output of the following C++ program. Use a * to indicate each blank.

```
#include <iostream.h>
#include <iomanip.h>

int main ()
{
    char ch;
    int n;
    float y;
    ch = 'A';
    cout << ch;
    ch = 'B';
    cout << ch << endl;
    n = 413;
    y = 21.8;
    cout << setw(5) << n << " is the value of n" << endl;
    cout << setw(7) << y << " is the value of y" << endl;
    return 0;
}
```

Exercise 2

Given that x is a float variable and $x = 24.3827$, show the output of each statement below. Use a * to indicate each blank.

- `cout << " x is " << setw(5) << setprecision(2) << x;`
- `cout << " x is " << setw(8) << setprecision(4) << x;`
- `cout << " x is " << setw(1) << setprecision(2) << x;`
- `cout << " x is " << setw(7) << setprecision(1) << x;`

Exercise 3

Write a program which sums a list of real numbers in a file.

The name of the input file is "numbers.dat" and the output should be displayed to the screen.

If the file contains no numbers, the program should output 0 as the value of the sum.

Exercise 4

Correct the following program so that it reads a value from the file inData and writes it to the file outData

```
#include <iostream.h>

int main ()
{
    int n;
    ifstream inData;
    outFile("results.dat");
    cin >> n;
    outFile << n << endl;
    return 0;
}
```

Exercise 5

Given these two lines of data

17 13

7 3 24 6

and this input statement

```
cin >> int1 >> int2 >> int3;
```

- What is the value of each variable after the statement is executed?
- What happens to any leftover data values in the input stream?

Exercise 6

Fill in the missing information in the table below!

i, j are int variables; a, b are char variables; and f, d are float variables

Statement	Data	Contents after input
cin >> i >> j >> f;	1 2.5	
cin >> i >> j >> f;	12.5	
cin >> f >> a >> b >> i;	12.5A35	
cin >> f >> a >> b >> i;	16.8.45	
cin >> a >> i >> f;	234.62	
cin >> i >> b >> a >> f;	12 45.	
cin.ignore(5,'d'); cin >> a;	hello world	
cin >> i; cin.get(a); cin >> j;	12.39	