Homework 3 – CSC 230-001, Spring, 2007
Issued 2/12/07, uncollected, ungraded

**Note:** Same comments as with HW1 applies.

1. Consider the following complete program (printf_conversions.c on the class website). The three macros are defined to float literals (as indicated by the decimal point followed by zero). The first and last printf() statements produce correct output, printing the values 4, 5 and 9 first as real numbers, then as integers. The middle printf() produces nonsense output. Explain why this happens. Compile the program and see if the compiler issues any warnings about this issue.

```c
#include <stdio.h>
#include <stdlib.h>

#define N1 4.0
#define N2 5.0
#define N3 9.0

int main ()
{
    printf("The float numbers are %f, %f and %f\n", N1, N2, N3);
    printf("Same numbers, mistakenly assumed int, are %d, %d and %d\n", N1, N2, N3);
    printf("Same numbers, cast to int, are %d, %d and %d\n", (int) N1, (int) N2, (int) N3);

    return (EXIT_SUCCESS);
}
```

2. Explain what would change or not change in the behavior (and why) if the program of Q1 is compiled to a.out and run with the following redirection on the command line:

```
a.out < printf_conversions.c
```

3. Same as Q2, except the redirection is now:

```
a.out > printf_conversions.c
```