CS3331 Numerical Methods

Quiz 1 Sample

September 19, 2008

Name: _____, ID: _____

1. Suppose the following word is a single floating-point number. What is its value? (The exponent bias of single is 127.)

0	1000 0001	0011 0000 0000 0000 0000 000

   Please write your answer in the following format.

$$\pm 2^k (a_1 2^{d_1} + a_2 2^{d_2} + a_3 2^{d_3} + \ldots)$$

2. What is the condition number of $f(x) = \sqrt{x} + 1$ at $x = 4$?