Quiz 01

Oct 16, 2009.

1.

2. How many "bits" does it take to store a floating point number in the range

$$\pm 1.a_1 a_2 \cdots a_s \times 2^e$$

with $s = 33$, $a_j \in \{0, 1\}$, $-511 \le e \le 512$?

3. Give a fixed point iteration for solving $x^3 - 3 = 0$. Make sure to check your method converges.

Quiz 01

Oct 16, 2009.

1. Propose a method of computing $\sin(1.00001) - \sin(1)$ to prevent loss of accuracy.

2. How many "bits" does it take to store a floating point number in the range

$$\pm 1.d_1 d_2 \cdots d_s \times 2^e$$

with $s = 33$, $d_j \in \{0, 1\}$, $-509 \le e \le 512$?

3. Describe the Newton's method for finding $\sqrt[3]{2}$.

4. Describe the secant method for finding $\sqrt[3]{2}$.

5. Give a fixed point iteration for solving $x^3 - 3 = 0$. Make sure to check your method converges.