

Mock Quiz #2

1. What are underflow and overflow?
2. For the following, find the smallest number, x , such that
 - a. $1 + x \neq 1$. Find the absolute error and relative error.

b. $2^{60} + x \neq 2^{60}$

c. $0.25 + x \neq 0.25.$

3. Suppose $x_1 = -b + \sqrt{b^2 + 1}$ and $x_2 = -b - \sqrt{b^2 + 1}$. Prove that $x_1 x_2 = -1$

4. For what value of b does the solution to one of the above equations become inexact.