

M147: Calculus I for the Biological Sciences

Fall 2010

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“When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science.”

—William Thomson, Lord Kelvin (1824-1907)

“Mathematics is biology’s next microscope—only better.”

—Rita Colwell, Director of the NSF, 1998-2004

“The study of mathematics is apt to commence in disappointment.... We are told that by its aid the stars are weighed and the billions of molecules in a drop of water are counted. Yet, like the ghost of Hamlet’s father, this great science eludes the efforts of our mental weapons to grasp it.”

—Alfred North Whitehead (1861-1947)

“I try to think but nothing happens.”

—Curly