READING RESPONSE 3 – MATH 397
April 23, 2018

ALEX THIES
athies@uoregon.edu

Title: The Derivative from Fermat to Weierstrass

Response: As has been the trend, I enjoyed the reading, and I found it particularly interesting how it laid out the seemingly backwards way that the calculus was discovered. I say backwards because in modern Calculus courses we start with the definition, and proceed from there, whereas as the reading points out, Fermat was using the general power rule for polynomials before Newton was even at Cambridge. In my own readings I've found a rift between mathematicians and physicists when it comes to writing about the history of the discovery/invention of the calculus by Newton and Leibniz, in that mathematicians tend to attribute the calculus to the study of pure mathematics, whereas physicists credit the discovery/invention to problems in mechanics. The reading did a very good job explaining the truth behind what motivated the discovery/invention of the calculus, i.e., problems from Greek geometry, trigonometry, early algebra, and physics. We often say that "all mathematics is cumulative" and this reading is pretty good at getting that point across.