Math 454 Dr. Kumaresan

## THE QUEST FOR THE DERIVATIVE HAMMER

Several years ago, Scarsdale High School was almost forced to close its doors due to an evil plot that was unleashed during Halloween. Jealous of Scarsdale's constant dominance in all extracurricular activities, the other schools of Westchester and Rockland (but mainly White Plains, Mamaroneck and New Rochelle) gathered together and designed a humanoid-robot to infiltrate the school through the STEAM department. His mission was to organically grow zombies in the back room of the Design Lab and release them into the school during the Senior breakfast. And he almost got away with it but for the heroism of Mr. Arrigo - legendary math teacher and arm-wrestler who taught in Room 256. Mr. Arrigo caught wind of the evil plan. He knew that the only way to stop the zombies was to use a weapon that had been passed on to him from the great mathematicians of the past. This weapon was passed on from Newton and Leibniz, to the Bernoulli brothers, to Euler, to Cauchy, to Riemann, to Weierstrass, to Lebesgue and finally to him. This weapon was known as the Derivative Hammer. In it was unimaginable power, but only the mathematically worthy and humble in heart could wield it. Mr. Arrigo used the Derivative Hammer to vanguish the zombies. By wielding it, he was able to change the zombies into candy corn at an INSTANTANEOUS rate. He then collected the candy corn and used it to energize his students to get a perfect 5 on the AP Calculus exam. Because of his bravery, he was given the title "Master Arrigo" and allowed to retire and enjoy life outside of Scarsdale. Before leaving the math department, Master Arrigo had to decide what to do with the Derivative Hammer. Even his best students (Mr. Vermes and Dr. K) did not prove themselves worthy to receive it. He knew that the Derivative Hammer was too powerful to hold on to or to pass on; but he also knew that Scarsdale could face another crisis again. So he hid the Derivative Hammer in a secret location in the school.

It is now 2019. There have been sightings of a strange ghost wandering through the 2nd floor at the High School. Some say it could be the ghost of the humanoid seeking revenge by rehashing his plot. Only the Derivative Hammer can stop him. Master Arrigo left you a series of clues in this room to recover the Hammer. He believed in you. Only you can protect the High School (not the BC or AB kids, but you!!!). Do you accept the challenge to find the Derivative Hammer and prove yourself worthy to wield its power?