

1014-W1-1686 **Stephen Hilbert***, 208 Northview West, Ithaca, NY 14850. *Quarter horses, deer and wolves*. Preliminary report.

One problem starts with a table of data on the distance traveled in a quarterhorse race. The data is used to illustrate the difference between average velocity and instantaneous velocity. The concept of concavity is used to predict the finish of the race. The second problem is a predator -prey scenario modeled with simple differential equations. The models vary depending on the ratio of the populations but can be estimated using exponential growth and Euler's method. (Received September 28, 2005)