

**Math 26L Lab Week #12 Assignment**

**The Logistic Equation**

Suppose you are given experimental data on the spread of a rumor throughout a group of 1000 people. As you saw in lab the differential equation  $\frac{dy}{dt} = ky(1000 - y)$  can sometimes be used to model the spread of a rumor. Write a paragraph explaining how you would determine if the data is logistic (the data being logistic just means that it obeys the differential equation above). Your paragraph should also indicate how you would find the value of  $k$  using the data.