Math152 – Spring 2016 – In-class Group Assignment 4

Suppose the population of a town can be approximated by $P(t) = 16,250(0.87)^t$

where P is the population of the town t years after 1985 (starting on January 1, 1985).

a) Find the rate of change of the population of the town on January 1, 2000? Is the population increasing or decreasing?

b) Find the rate of change of the population of the town on January 1, 2010? Is the rate of change faster or slower than it was in 2000?

c) What do you expect to happen to the population in the long term? What mathematical tools can you use to verify your hypothesis?