**Worksheet 1, MAT1375, Spring 2019**

**Compound Interest**

**Name:**

**Instructions:** This is due at the beginning of the class on April 15.

Please watch the following video on “e and compound interest”:

[**https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/e-and-the-natural-logarithm/v/e-through-compound-interest**](https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/e-and-the-natural-logarithm/v/e-through-compound-interest)

Answer the following questions:

**Question 1**: According to the video, if you borrow $1 for 1 year at an interest rate of 100% compounded yearly you would have to pay $2 at the end of the year, and if you borrow $1 for 1 year at an interest rate of 100% compounded twice a year you would have to pay $2.25 at the end of the year. Can you explain why?

**Question 2:** Please use your words to explain what is the constant e according to this video.