Dear Calculus student,

My name is Cimondo Yklev, and I a medical student at Mordatuth Medical School. I've been taking a class on Clinical bacteriology with professor Smosik-est this term, and have been very well until this last weekend. I spent two weeks carefully preparing a bacteria culture (Luclacus con gelarba) in order to study its growth in a particular medium. I had planned to let the bacteria grow for ten hours, and then count how many I had. Unfortunately, things didn't go as I had planned.

I finally started the study last Friday night at 10:00 p.m., but I was in a hurry to get home to catch the beginning of a Trading Spaces marathon on TLC, and I forgot to count the number of bacteria that were in the culture when I started the experiment. To make matters worse, I stayed up so late watching the show (Vern was the designer three times in a row - I love him!) that I overslept, and couldn't take measurements until ten hours later at 8:00 a.m. I finally got to the lab at 10:00 a.m., at which point the number of bacteria was 60,000. I don't know if it would help, but I waited around until noon, at which time there were 100,000 bacteria.

I'm pretty sure that we can assume that the rate of growth was proportional to the number of bacteria during the entire experiment, but I don't know if that gives me enough information to figure out what I need to know. I'm supposed to report that initial number of bacteria, and how many there were after the experiment had been running for ten hours (at 8:00 a.m.). If only I had studied calculus harder while I was a college student!! Can you determine the information that I need? Thanks for your help!!

Cimondo Yklev