Quiz 2   Calculus 1   1/27/2006

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Suppose that a population of nasty mutant flesh-eating bacteria is doubling every 5 hours, and that initially there were 300 bacteria. Give a formula for the size of the population after t hours.

2. Suppose that the amount of radioactive strontium in a town's water supply is given by $S(t) = 5000 \cdot 2^{-t/29}$, where t is in years and $S(t)$ is in grams. How long will it take until less than 1000 grams remain?