Exponential Growth and Decay

1. Carbon-14 has a half-life of 5750 years. If initially there are 80 milligrams of Carbon-14, how many grams are left after 2000 years?

2. The amount of bacteria in a culture at any time increases at a rate proportional to the amount of bacteria present. There are 200 bacteria after one day and 500 bacteria after the third day.

    a. How many bacteria were initially present?

    b. How many bacteria will there be after 6 days