DoThis 4.8 NAME:

Plutonium-241 decays according to the function $A(t) = A_0 e^{-.053t}$ where A_0 is the initial amount (mass, in grams) present, t is the time (in years), and $A(t)$ is the amount (grams) present after t years.

a.) A 300 gram sample of Plutonium-241 exists now ($t = 0$). How much will be present after 600 years? (Your answer will be in scientific notation. Make sure you write it correctly. Also, write your answer in phrase or sentence form.)

b.) A 300 gram sample of Plutonium-241 exists now ($t = 0$). How many years will it take for the sample to decay to just 10 grams? If you solve algebraically, show your work. If you solve graphically, draw and label the appropriate graph. Write your answer in phrase or sentence form.