Homework 2

AST 422 Spring 2007

Current age of the Universe is given by $T_0 = H_0^{-1}$.

(1) Assuming the Hubble constant, H_0, is 500 ($km\,s^{-1}\,Mpc^{-1}$), what is the current age of the Universe?
What is wrong with this assumption?

(2) What is the age of the Universe if H_0 is 73 ($km\,s^{-1}\,Mpc^{-1}$)?

(3) Show that the Hubble Radius is, $R_0 \sim 4300(Mpc)$, if the value of the Hubble constant is $H_0 = 71(km\,s^{-1}\,Mpc^{-1})$