**The Hubble Constant and the Age of the Universe**

We will collect the velocities and distances for the set of galaxies listed above to plot the recession velocity vs. distance. What is the Hubble Constant based on our measurements?

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If the universe has been expanding at a constant speed since its beginning, the universe's age would simply be 1/*Ho*. Since 1 Mpc = 3.09 x 1019 km , first divide this distance by our calculated value for the Hubble Constant to get the expansion age in seconds, and then divide by the number of seconds in a year (3.1 x 107 seconds per year) to get the age in years.

Expansion age of the Universe = $\frac{3.1\*10^{19} km/Mpc}{\frac{H\_{o}\frac{km}{sec}}{Mpc}\*3.1x10^{7} sec}$ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This is a very simple model for the expansion of the universe. A better model would account for the deceleration caused by gravity. Models like this predict the age of the universe to be just 2/3 of this value.

Corrected expansion age: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How does the Hubble expansion age compare to the age of the Sun (4.6 billion years)?