Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Drake Equation Worksheet

The Drake Equation: Ν = Ν\* · fs · Np · fe · fl · fi · fc · ft

Ν = the number of technical civilizations in the Galaxy at the present time

**Factors My Guess**

*every one of these that says fraction must be between zero and one*

N\* = the number of stars in our Galaxy *(this is pretty well known)* N\* = \_\_\_\_\_\_\_\_

fs = the fraction of all stars that are similar to the Sun *(that is, G type stars)* fs = \_\_\_\_\_\_\_\_

Np = the average number of planets per Sun-like star *(is the solar system typical?)* Np = \_\_\_\_\_\_\_

fe = the fraction of planets about Sun-like stars that are similar to the Earth fe = \_\_\_\_\_\_\_\_

fl = the fraction of such planets on which life has actually developed

 *( this is the hard one!)* fi = \_\_\_\_\_\_\_\_

fl = the fraction of these planets on which intelligent life has evolved

 *( there is life. is any of it intelligent?)* fl = \_\_\_\_\_\_\_\_

fc = the fraction of these planets on which a technical civilization has developed

 *( can they build radios?)* fc = \_\_\_\_\_\_\_\_

ft = the fraction of time since the development of life on that planet that a technological

 civilization has existed on the planet; ft = L / t

 L is the lifetime of an average intelligent civilization and t is the average time

 elapsed since the inception of life on each planet t is estimated at about 3 billion years

 ft  = L/ 3 billion years = \_\_\_\_\_\_\_\_

N = \_\_\_\_\_\_\_\_\_\_\_\_ this is your guess at the number of intelligent civilizations in the Milky Way galaxy today.

So… are we alone?

How confident are you about all of your numbers?