**The Drake Formula**

Locate the Drake formula calculator at <http://www.astro.indiana.edu/drake/intro.html> and calculate the number of technological civilizations in the Milky Way (again, set the number of galaxies in the universe equal to one to calculate for the Milky Way only ).

For each, term indicate your reason for selecting the value you have entered.

Fraction of stars than can have habitable planets or moons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

Number of habitable bodies for each star than can have them \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

Fraction of habitable bodies on which life evolves \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

Fraction of habitable bodies with life that evolve intelligent life \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

Fraction of worlds with intelligent life on which life becomes technological \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

Fraction of a star’s life that a technological civilization survives \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why?

**Program Outputs**:

Number of technological civilizations in the visible universe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of technological civilizations in the Milky Way \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Distance to our nearest neighboring technological civilization \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Based on this calculation, what is the probability that we are not alone? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Is the probability you estimate with the Drake Formula Solver consistent with your expectations? Why or why not?**