ASTRONOMY: LIFE IN THE UNIVERSE NAME:
Homework Set #5 ***The Drake Equation*** ID#:
Due June 2 @ 10:00 AM Date:

1. Although the textbook (p. 409) and the class note mention that there are 2 *single main sequence* stars (Tau Ceti & Epsilon Eridani) in Table 16.1 with the proper spectral type to be good candidates for having suitably wide CHZs, you could probably make a good case for one other *single main sequence star* from that same table (stars listed as "A" and "B" are binary stars, not single). Which one is it, *and why*? *(3 points)*

2. On the Exoplanet web page, there is a list of all the stars with planets that is continually updated: http://exoplanets.org/planets.shtml How many of these stars have 2 or more planets detected so far? Which ones have 3 or more? *(4 points)* Note: *Be careful, as there are often 2 of these listed in the table in succession, and they may look like one at first glance.*

3. How uncertain are the results, **numerically**, of estimating the number of intelligent communicative civilizations, after including L_{ic}, using the Drake Equation? You can calculate this number by taking the ratio of the Best and Worst case numbers from the class notes, or using the values in the textbook. If you use the values in the textbook (Table 18.1) you will need to state clearly what value of L_{ic} you are using to get your final answer. That table lists the cases before plugging in a value of L_{ic} *(3 points). And yes you have to calculate a final number to get full credit.*