Math 3890, Machine Problem 9: Due Tu., 3/23/21

1) Write a function `[x,y,TRI] = refinect(xo,yo,TRIo)` that finds the CT refinement $\triangle$ of an initial triangulation $\triangle_o$ described by `xo,yo,TRIo`. The vectors `x,y` should contain the barycenters of the triangles in $\triangle$, while `TRI` gives the connection matrix.

2) Write a script to test your function. It should
   a) call `readtri` to read a triangulation from a file
   b) call `refinect` and print $[x, y]$
   c) plot the refined triangulation $\triangle$
   d) Run your script for the file `tri8.dat`

3) Modify your function `refinect` to create a function `refinecti` which uses the incenters instead of the barycenters.

4) Repeat your test run using the modified refinement function instead of `refinect`. As before, plot the refined triangulation and print its $[x, y]$ coordinates (they will be different than those in 2)).