MATH.2720   Introduction to Programming with MATLAB
Homework on Symbolic Utilities and Miscellaneous Utilities (Due 4/19)

Please email your script file(s) to me at `stephen_pennell@uml.edu`

1. Use MATLAB's symbolic capabilities to find the exact value of $\int_0^\infty e^{-x^2}\,dx$

2. Use MATLAB's symbolic capabilities to find the points of intersection of the circles $x^2 + y^2 = 1$ and $(x-2)^2 + (y-1)^2 = 4$.

3. Use `fzero` to locate a root of $f(x) = e^x - 5x^3$ on the interval $[-1, 1]$

4. Use `fminbnd` to find the location of the minimum value of $f(x) = e^x - x^3$ on the interval $[-1, 1]$. (Note that this is not quite the same function as in the last problem.)