Exercises for Practical #3

In this practical you will practice some more advanced plotting in MATLAB.

1. Plot the convergence of your bisection algorithm from Practical #2 for the function $f(x) = x^{10} - 1/10$ on the interval $[0, 1]$.

2. Make surface plots of the following functions over the given ranges:

   (a) $(x^2 + 3y^2)e^{-x^2-y^2}$, $\quad -3 \le x \le 3, -3 \le y \le 3$

   (b) $-3y/(x^2 + y^2 + 1)$, $\quad |x| \le 3, |y| \le 4$

   (c) $|x| + |y|$, $\quad |x| \le 1, |y| \le 1$

   (d) $\sin(x)\cos(y)$, $\quad (x, y)$ inside circle of radius 1.

3. Make contour and mesh plots of the function in question 2(a).