

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) $(x^2 + 3y^2)e^{-x^2-y^2}$, $-3 \leq x \leq 3, -3 \leq y \leq 3$
 - (b) $-3y/(x^2 + y^2 + 1)$, $|x| \leq 3, |y| \leq 4$
 - (c) $|x| + |y|$, $|x| \leq 1, |y| \leq 1$
 - (d) $\sin(x) \cos(y)$, (x, y) inside circle of radius 1.
3. Make contour and mesh plots of the function in question 2(a).