

MATLAB Exercise 9 – Graphics -Surface

1. Plot $z = 0.3e^{-0.15(x^2+y^2)} - 0.03e^{0.15(x^2+y^2)}$ on the region of D: $-4 \leq x \leq 4, -5 \leq y \leq 5$,
by
1) plot3 2) mesh 3) surf 4) meshz 5) surf
2. Plot $z = \sin(\sqrt{x^2 + y^2}) / \sqrt{x^2 + y^2}$ on the region of D: $-9 \leq x \leq 9, -9 \leq y \leq 9$, with
title, x, y, and z label, grid on, displaying multiple plots per figure
1) plot3 2) mesh 3) surf
3. Display a graph which is $x = u \cos v, y = u \sin v, z = 2u + 8v; 0 \leq u, v \leq 4\pi$ in three
figures by
1) plot3 2) mesh 3) surf
4. Plot the 3-D curve $x = 0.5t^2, y = 0.1t^3, z = 9 \cos 2t, t \in [0, 6]$.
5. Plot an upper semisphere. 上半球
6. Plot a polygon and fill it with blue color.
7. *Plot a pentagram. 五角星
8. *Displaying nonuniform data on a surface of $x = u \cos v, y = u \sin v, z = 2u + 8v$.