

The thin flat sheet shown above has density

$$P(x,y) = \frac{(xy+2x+y^2)e^y}{\sqrt{3x^5+2y^4+7}}$$

Write a MATLAB program to calculate and print the mass of the thin flat sheet. Use 1e-7 as the accuracy factors. The output of this program should look like this:

mass = 1546.78789