Problems for Lab 5

Objectives:

1. To learn rasterisation(scan conversion or sampling) using OpenGL
2. To observe aliasing

1. Given the end points (x1, y1) and (x2, y2) of a line segment, find slope m, and y-intercept b. Compute the value of y=mx+b for each integer value of x starting from x1 to x2 and plot (round(x), round(y)) with the step size 5. Repeat the plotting for step size 4, step size 3, step size 1. What do you observe on these 5 plots
    a. When m>1, check if your program works
    b. When line segment is horizontal or vertical, check if your program works
2. Given the parameter of a and b of ellipse x= a cos(theta); y= b sin(theta), plot the points (round(x), round(y)) for theta varies from 0 to 2*PI, with various step sizes and observe the quality of the plot. Also check if circle is plotted when a=b.