YAPS: Yet Another Problem Set Interchanging Integrals

The following are questions/issues to help you to organize your thoughts. The answers are to be found by looking at the work we did in class.

1) Draw sketches of Type I and Type II regions.

2) Does a Type I integral have $\int \int dxdy$ or $\int \int dydx$?

3) What does it mean that a Type II domain has $x = g_L(y)$ instead of $y = g_L(x)$?

4) Sketch the two regions

$$D_1 = \{(x,y) | 0 \leq y \leq 1; \ 0 \leq x \leq \sqrt{y}\} \quad D_2 = \{(x,y) | 0 \leq y \leq 1; \ \sqrt{y} \leq x \leq 1\}$$