

$$I_3 = \int_0^1 dz \int_0^{1-z} dy \int_0^{y^2} dx f(\dots).$$

4) Using the same pictures as in part 3), one can write

$$I_4 = \int_0^1 dz \int_0^{\sqrt{1-z}} dx \int_{\sqrt{x}}^{1-z} dy f(\dots).$$

Please draw a 2-d picture that clarifies the integrations over x and y as an exercise.

5) Now we want to write

$$I_5 = \int dy \int dz \int dx f(\dots)$$

