So the second integration (over y) goes from $\sqrt{x^*}$ to 1:

$$I_1 = \int_0^1 dx^* \int_{\sqrt{x^*}}^1 dy \int dz \; f(\;)\,.$$

Finally, for a fixed value of y, the variable z is allowed to vary between 0 and $1-y$ (see the 2-dim picture above), so

$$I_1 = \int_0^1 dx \int_{\sqrt{x}}^1 dy \int_0^{1-y} dz \, f(x,y,z).$$

Here I omitted the star on the x, which was used only temporarily to make things clearer; from now on I will not use such temporary notations.

2) It is easy to use the above pictures in order to write the integral in the form

$$I_2 = \int dx \int dz \int dy \; f.$$

The integration over x will go again from 0 to 1 and for a fixed value of x in $[0,1]$, we will have the 2-dim picture above. For this fixed value of x, the variable z may vary between 0 and $1-\sqrt{x}$ (I am omitting the star), so the integral becomes