(39) $\int_0^1 \int_0^{1-x} (1-x-y)\, dy\, dx$ $\quad D=\{(x,y) \mid x\in[0,1] \wedge y\in[0,1-x]\}$

$z = 1-x-y$

$x+y+z=1$

if $y=0$ and $z=0$ $\quad x=1$

if $z=0$

$x+y=1$

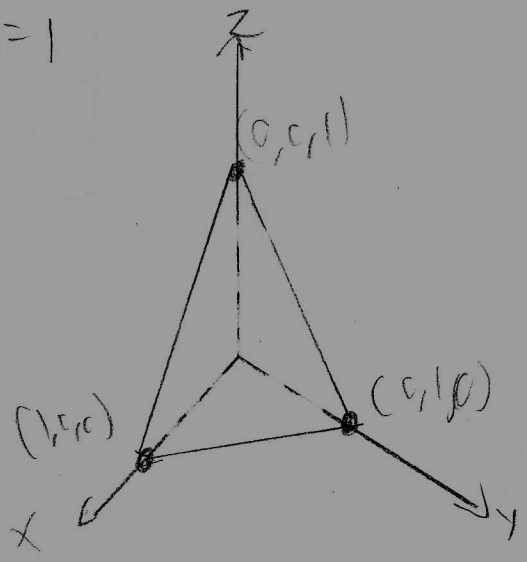
$y=1-x$

points:

$(1,0,0)$

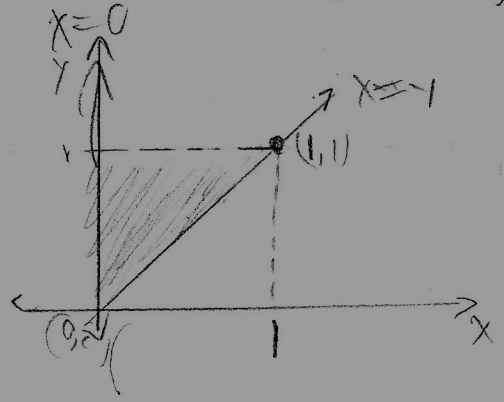
$(0,1,0)$

$(0,0,1)$



(15) $\int_0^1 \int_0^1 f(x,y)\, dx\, dy = \int_0^1 f(x,y)\, y\, dy = \frac{1}{2} f(x,y)\, y^2 \Big]_0^1 = \frac{1}{2} f(x,y)$

$D=\{(x,y) \mid y\in[0,1] \wedge x\in[0,y]\}$



$D=\{(x,y) \mid y\in[x,1] \wedge x\in[0,1]\}$

$$\boxed{\int_0^1 \int_x^1 f(x,y)\, dy\, dx}$$