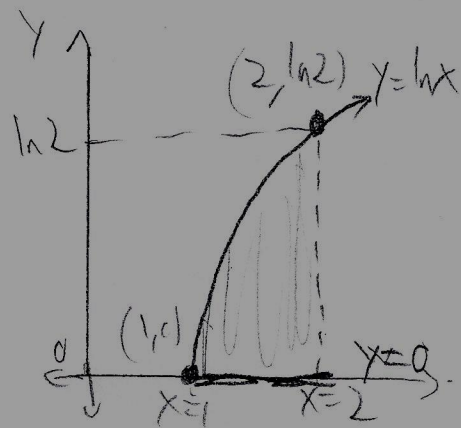


(49) $\int_1^2 \int_0^{\ln x} f(x,y) dy dx$

$y = \ln x$
 $x = e^y$

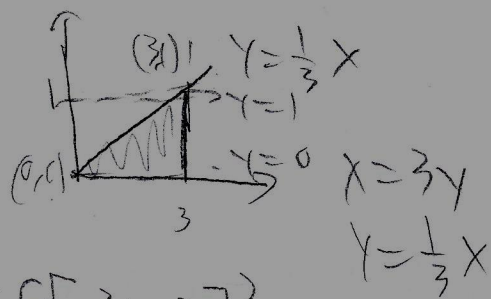


$D = \{ (x,y) \mid x \in [1,2] \wedge y \in [0, \ln x] \}$

$D = \{ (x,y) \mid y \in [0, \ln 2] \wedge x \in [e^y, 2] \}$

$\int_0^{\ln 2} \int_{e^y}^2 f(x,y) dx dy$

(50) $\int_0^1 \int_{3y}^3 e^{x^2} dx dy$



$D = \{ (x,y) \mid y \in [0,1] \wedge x \in [3y, 3] \}$

$D = \{ (x,y) \mid x \in [0,3] \wedge y \in [0, \frac{1}{3}x] \}$

$\int_0^3 \int_0^{\frac{1}{3}x} e^{x^2} dy dx = \int_0^3 \left[\frac{1}{3} x e^{x^2} \right] dx = \frac{1}{6} \int_0^9 e^u du = \left[\frac{1}{6} (e^9 - 1) \right]$

$u = x^2$
 $du = 2x dx$
 $\frac{1}{2} du = x dx$