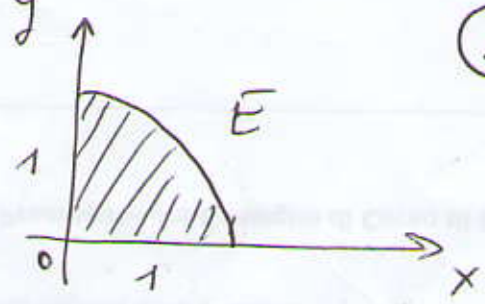
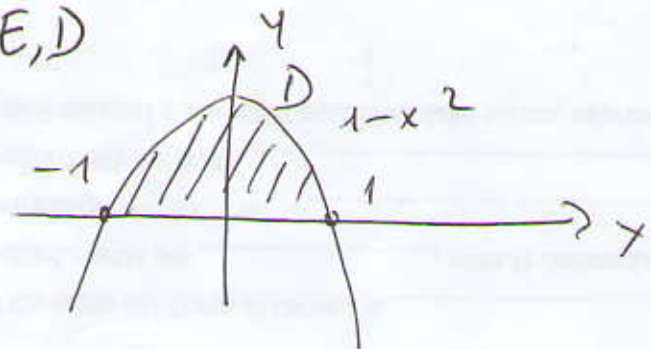


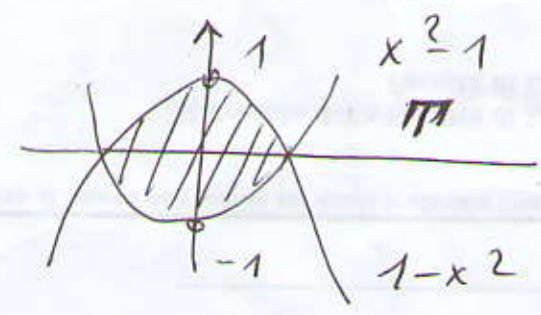
INTEGRALI DOPI

(A)

① $\int_{E,D} x e^y dx dy$



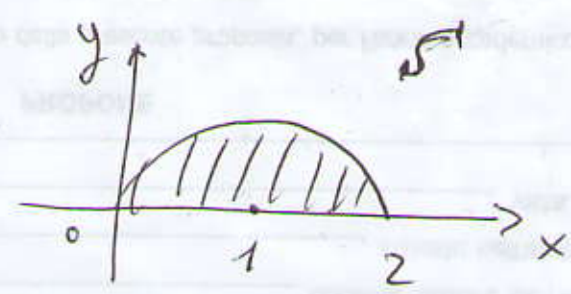
② $\int_{\pi} x \cos(1-y) dx dy$



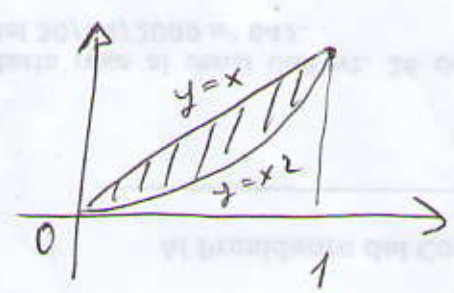
③ $\int_{\pi} \arcsin x dx dy$



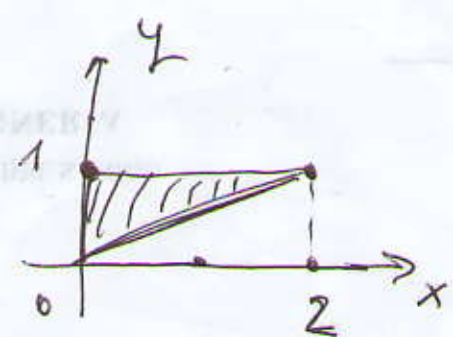
④ $\int_{S^1} xy dx dy$



⑤ $\int_P \frac{x}{1+y} dx dy$

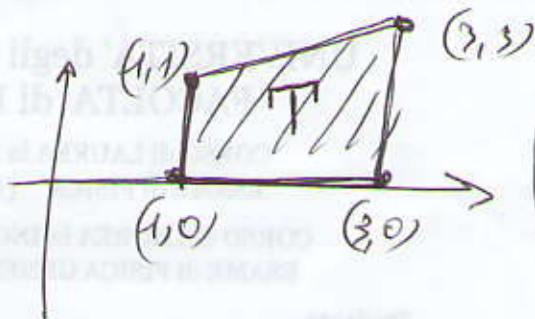


⑥ $\int_{\pi} e^{y^2} dx dy$

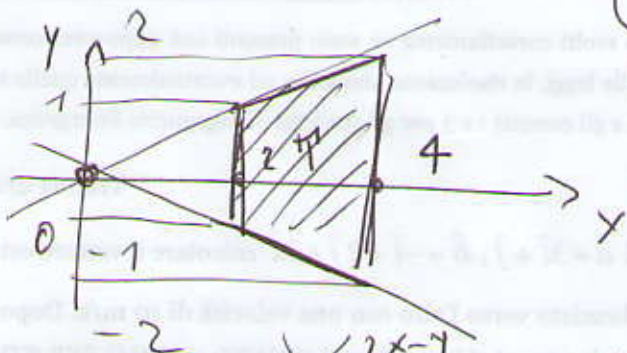


QUESTI INTEGRA
LI SI RISOLVONO
FACILMENTE
APPLICANDO
IL TEOREMA DI
FUBINI
 $\int_a^b dx \int_{\gamma(x)}^{\delta(x)} f(x,y) dy$

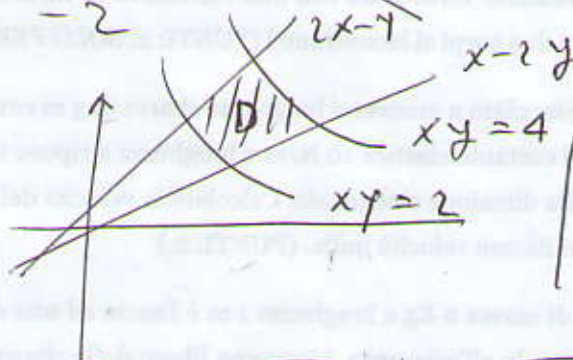
$$(7) \int_{\mathcal{T}} \frac{dx dy}{x^2 + y^2}$$



$$(8) \int_{\mathcal{T}} \frac{dx dy}{\sqrt{x^2 - y^2}}$$



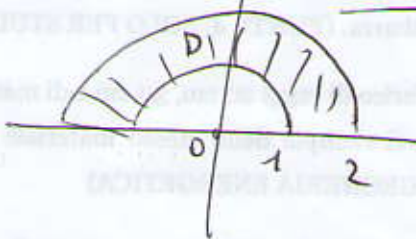
$$(9) \int_D x^2 y^2 dx dy$$



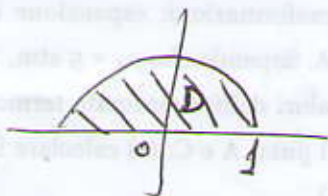
anche questi con Polar. (B)

CAMMO IN VARIABILE \rightarrow POLAR

$$(10) \int_D \frac{y}{x^2 + y^2} dx dy$$



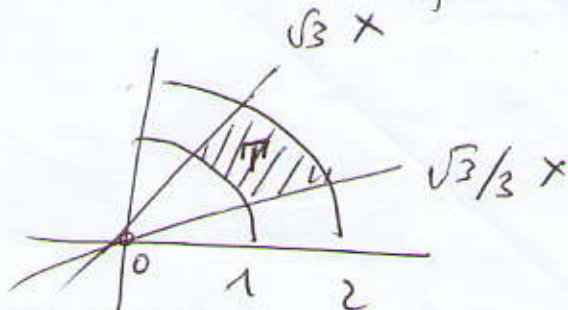
$$(11) \int_D \sqrt{x^2 + y^2} dx dy$$



$$(12) \int_C x^2 e^{-(x^2 + y^2)} dx dy$$



$$(13) \int_{\mathcal{T}} x dx dy$$



CAMMO VARIABILI $\begin{cases} u = x-y \\ v = x+y \end{cases}$

(C)

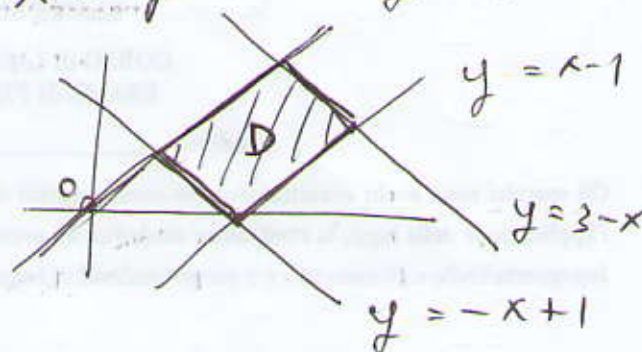
(14) $\int (x-y) \ln(x+y) dx dy$

$y = x$

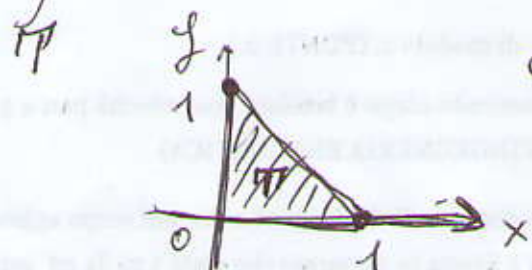
$y = x-1$

$y = 3-x$

$y = -x+1$



(15) $\int e^{\frac{x-y}{x+y}} dx dy$

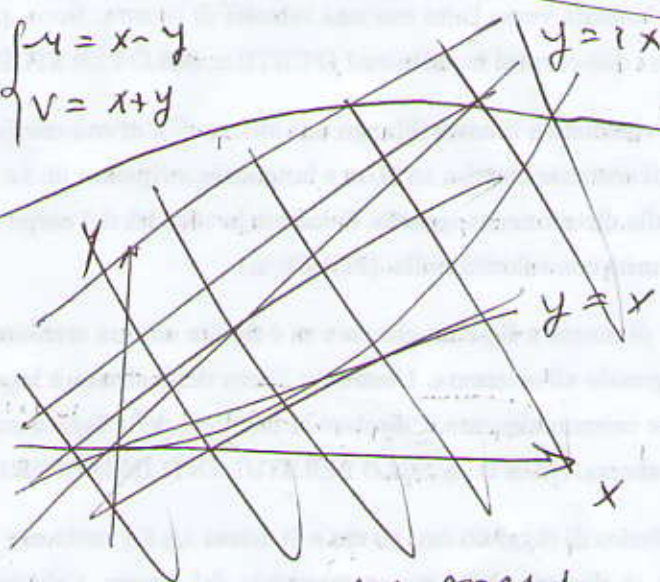


CAMMO VARIABILI

$\begin{cases} u = x-y \\ v = x+y \end{cases}$

(16) $\int \frac{x}{y} dx dy$

$T \rightarrow \begin{cases} y=x & \text{e } y=2x \\ y=x^2 & \text{e } y=2x^2 \end{cases}$



CAMMO VARIABILI

$\begin{cases} u = y/x \\ v = y/x^2 \end{cases}$

hanno le minime obbl. dominio minimo

(17)

$\begin{cases} y+2x=0 & y+2x=1 \\ y=x^2 & y=x^2+1 \end{cases}$

~~Ellisse~~

con l'asse piano (18)

EQUAZIONI DIFFERENZIALI

$m''' - m' = x^2 + e^x$

$m'' - 4m' + 5m = xe^{2x} \ln x$

$m'' - 2m = (x-1) \ln x$

$m''' - 3m'' + 2m' = (x-1)(e^x - 1)$

$m'' + 4m = \ln x \ln x$

$y'' + y = \frac{1}{\cos x}$

$y'' + y = \ln x$

NETOMO VARIATIONE DELLE COSTANTI