```
b) \iint (x^2 + y^2) dx dy
                                                                                     golue D: x2+y2- 2y ≤ 0
          Downame okregu x2+y2-2y=0 one ownsortnoolnys bregu-
           nowigh (x= g cos P, y= g sin P) mo postae:
              (8 cos4)2+(gain4)6-28 min 4=0
              92 cos 2 4 + 92 sin 4 - 2 g sin 9 = 0
               92 (cos 4+ mn 74) - 29 min 9 = 0
               g^{2} - 2g \sin \varphi = 0

g(g - 2g \sin \varphi) = 0

g = 2 \sin \varphi
              Zatem Obnar Cathomania D
           In mount immiges dustony
            jest mendionasciami
                                                                                                                                                                                                                  x2+y2-2y = 0
             0 5 9 5 2 sin 9
                                                                                                                                                                                                                   x2+(y-1) = 1
                                                                  ψ π > φ
             S (x1+y2) dxdy = S [(8cos4)2+(8nn4)2] g dg df =

= S [g2cos24+ g2nn24] g dg df = S g3dgdf = 5 df S g3dg =
           = St. [484] 8=2 sin P d 4= Sty · 16 sin 4 - 4.0] d 4= 5 4 sin 4 d 4=
         = 45" sin 49 d4 =
                                                            \int \sin^{n} x dx = -\frac{1}{n} \cos x \sin^{n-1} x + \frac{n-1}{n} \int \sin^{n-2} x dx =
                                                           \int \sin^4 x \, dx = -\frac{1}{4} \cos x \sin^3 x + \frac{3}{4} \int \sin^2 x \, dx =
                                                                                          = -\frac{1}{4} \cos \times \sin^3 x + \frac{3}{4} \left[ -\frac{1}{2} \cos \times \sin x + \frac{1}{2} \int \sin^9 x \, dx \right] =
                                                                                          = -\frac{1}{4} \cos x \sin^3 x + \frac{3}{8} \cos x \sin x + \frac{3}{8} x
         = 4 \left[ \frac{3}{8} \times - \frac{1}{9} \cos x \sin^3 x - \frac{3}{8} \cos x \cos x \right] =
          = 4 [ \frac{3}{8} \tau - \frac{1}{4} \cos \tau \text{ sin}^3 \tau - \frac{3}{8} \cos \tau \text{ sin} \tau - \frac{3}{8} \cos \tau \text{ sin} \tau - \frac{3}{8} \cos \text{ onin} \frac{3}{9} - \frac{3}{8} \cos \text{ onin} \text{ old } - \frac{3}{8} \cos \text{ old 
           =4\left[\frac{3}{8}\pi-\frac{1}{4}\cdot 0-\frac{3}{8}\cdot 0-(0-0-0)\right]=\frac{3}{2}\pi,
```