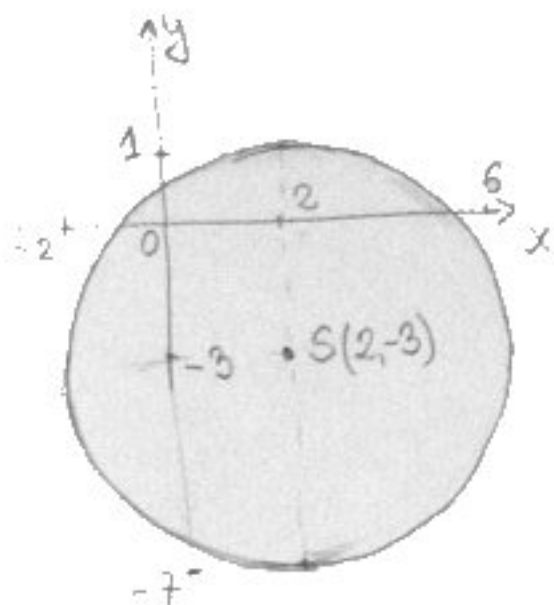


6.3B(29)

$$\begin{aligned}x &= 2 \pm \sqrt{7-6y-y^2} \\(x-2) &= \pm \sqrt{7-6y-y^2} \\(x-2)^2 &= 7-6y-y^2 \\(x-2)^2 + (y+3)^2 &= 16\end{aligned}$$

Кружница

$$\begin{aligned}y+3 &= \pm \sqrt{16-(x-2)^2} \\y &= -3 \pm \sqrt{12-x^2+4x}\end{aligned}$$

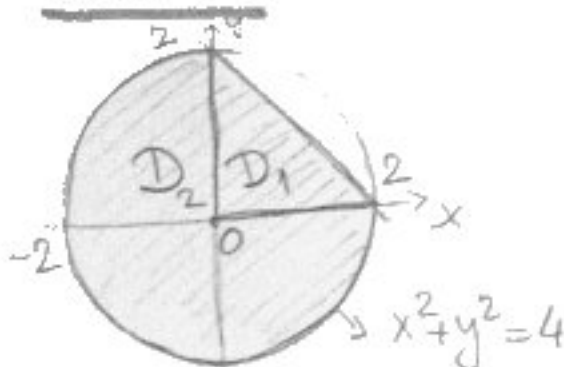


Област D је цео круг

$$\begin{aligned}&\int_{-7}^1 dy \int_{2-\sqrt{7-6y-y^2}}^{2+\sqrt{7-6y-y^2}} f(x,y) dx \\&= \iint_D f(x,y) dx dy = \\&= \int_{-2}^6 dx \int_{-3-\sqrt{12-x^2+4x}}^{-3+\sqrt{12-x^2+4x}} f(x,y) dy\end{aligned}$$

ТРЕЋИ ЗАДАТАК

6.4A(4)



$$\begin{aligned}x &= \rho \cos \varphi \\y &= \rho \sin \varphi\end{aligned}$$

$$\begin{aligned}x^2 + y^2 &= 4 \\ \rho^2 &= 4 \\ \rho &= 2\end{aligned}$$

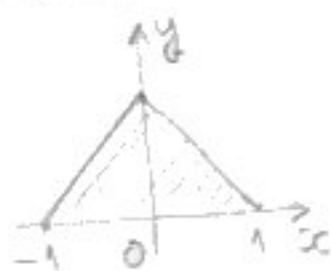
$$\begin{aligned}x+y-2 &= 0 \\ \rho \cos \varphi + \rho \sin \varphi - 2 &= 0 \\ \rho &= \frac{2}{\cos \varphi + \sin \varphi}\end{aligned}$$

$$D = D_1 \cup D_2$$

$$\begin{aligned}D_1^*: & 0 \leq \varphi \leq \frac{\pi}{2} \\ & 0 \leq \rho \leq \frac{2}{\cos \varphi + \sin \varphi}\end{aligned}$$

$$\begin{aligned}D_2^*: & \frac{\pi}{2} \leq \varphi \leq 2\pi \\ & 0 \leq \rho \leq 2\end{aligned}$$

6.4A(19)



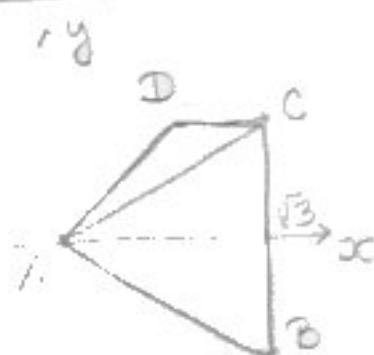
$$\begin{aligned}x &= 1-y \\ \rho \cos \varphi &= 1 - \rho \sin \varphi \\ \rho &= \frac{1}{\cos \varphi + \sin \varphi}\end{aligned}$$

$$\begin{aligned}x &= y-1 \\ \rho \cos \varphi &= \rho \sin \varphi - 1 \\ \rho &= \frac{1}{\sin \varphi - \cos \varphi}\end{aligned}$$

$$D = D_1 \cup D_2; \quad D_1^*: \begin{aligned} & 0 \leq \varphi \leq \frac{\pi}{2} \\ & 0 \leq \rho \leq \frac{1}{\cos \varphi + \sin \varphi} \end{aligned}$$

$$D_2^*: \begin{aligned} & \frac{\pi}{2} \leq \varphi \leq \pi \\ & 0 \leq \rho \leq \frac{1}{\sin \varphi - \cos \varphi} \end{aligned}$$

6.4A(28)



ABCD:

$$\begin{aligned}AC: & y = \frac{1}{\sqrt{3}}x \\ \rho \sin \varphi &= \frac{1}{\sqrt{3}} \rho \cos \varphi \\ \tan \varphi &= \frac{1}{\sqrt{3}} \\ \varphi &= \frac{\pi}{6}\end{aligned}$$

$$\begin{aligned}AB: & y = -\frac{1}{\sqrt{3}}x \\ \varphi &= -\frac{\pi}{6}\end{aligned}$$

$$\begin{aligned}AD: & y = x \\ \varphi &= \frac{\pi}{4}\end{aligned}$$

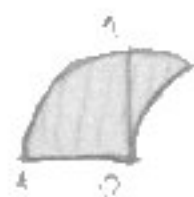
$$\begin{aligned}BC: & x = \sqrt{3} \\ \rho \cos \varphi &= \sqrt{3} \\ \rho &= \frac{\sqrt{3}}{\cos \varphi}\end{aligned}$$

$$\begin{aligned}DC: & y = 1 \\ \rho \sin \varphi &= 1 \\ \rho &= \frac{1}{\sin \varphi}\end{aligned}$$

$$D = D_1 \cup D_2; \quad D_1^*: \begin{aligned} & -\frac{\pi}{3} \leq \varphi \leq \frac{\pi}{2} \\ & 0 \leq \rho \leq \frac{\sqrt{3}}{\cos \varphi} \end{aligned}$$

$$D_2^*: \begin{aligned} & \frac{\pi}{2} \leq \varphi \leq \frac{\pi}{4} \\ & 0 \leq \rho \leq \frac{1}{\sin \varphi} \end{aligned}$$

6.4A(17)



$$D = D_1 \cup D_2$$

$$\begin{aligned}D_1^*: & \frac{\pi}{2} \leq \varphi \leq \frac{\pi}{2} \\ & \sin \varphi \leq \rho \leq 1\end{aligned}$$

$$\begin{aligned}D_2^*: & \frac{\pi}{2} \leq \varphi \leq \pi \\ & 0 \leq \rho \leq 1\end{aligned}$$