

Σεπ 2023

a)
$$I = p \cdot V = \frac{300}{1000} \cdot \pi \cdot 3^2 \approx 8.482 \approx 8.5$$
$$\delta I = V \sqrt{p - p^2} / \sqrt{N} = \pi \cdot 3^2 \sqrt{0.3 - 0.3^2} / \sqrt{1000} = 0.4$$

b) for i in range(N):

$$\begin{aligned} x &= 6 \cdot U() - 3 \\ y &= 4 \cdot U() \end{aligned}$$

$$\left\{ \begin{array}{l} \text{ευφάρσιστα} \\ x = 3U() - 3 \\ y = 4U() \end{array} \right\}$$

$$\left\{ \begin{array}{l} \text{ευφάρσιστα} \\ x = 8U() - 4 \\ y = 6U() \end{array} \right\}$$

if $x^2 + (y-3)^2 < 3^2$ and $(x+2)^2 + (y-2)^2 < 2^2$:
accept (x, y)

