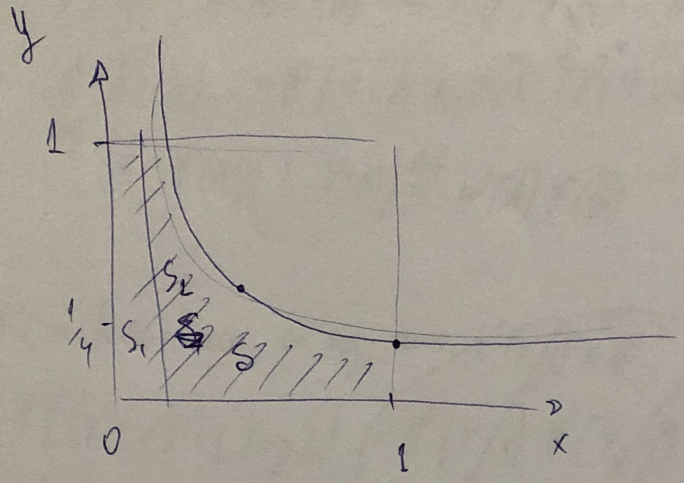
Зад. x, y случ. в $[0,1]$

$\mathbb{P}(xy \le 1/4)$

$y \le \frac{1}{4x}$



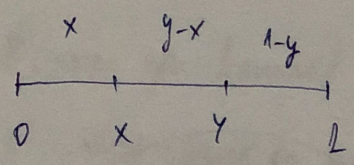
Отг: $S_1 = 1/4$

$S_2 = \int_{1/4}^{1} \frac{1}{4x}\,dx = \frac{1}{4}\ln x \Big|_{1/4}^{1} =$

$= \frac{1}{4}\left(\ln 1 - \ln \frac{1}{4}\right) = \frac{1}{4}\ln 4$

Отг: $\frac{S_1+S_2}{S_\square} = \frac{S_1}{1} = \frac{1}{4}(1+\ln 4)$

Чад:

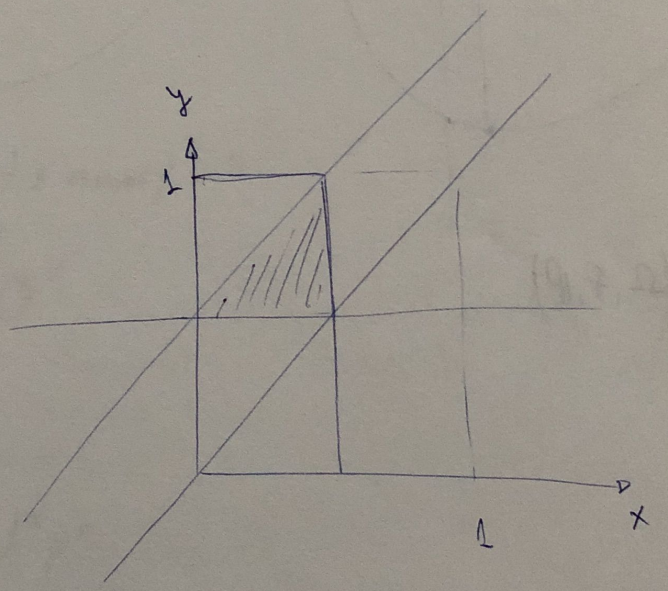


1 сл $y \ge x$

$x + (y-x) \ge 1-y \iff y \ge \frac{1}{2}$

$x + (1-y) \ge y-x \iff y-x \le \frac{1}{2}$

$(y-x) + (1-y) \ge x \iff x \le \frac{1}{2}$



Отг: $\frac{S_1+S_2}{S_\square} = \frac{2 \cdot 1/8}{1} = \frac{1}{4}$

Хвърляме зар

Ако се падне 1, печелим 10лв

Ако се падне 4, печелим 35лв

Ако се падне др. число 15лв

$X: \Omega \longrightarrow \mathbb{R}$

$(\Omega, \mathcal{F}, \mathbb{P})$

$x \in (2,3)$

$\mathbb{P}(X \in (2,3))$

Дефиниция: Нарича се X - сл.вел, ако $X: \Omega \longrightarrow \mathbb{R}$

$\forall A \in \mathcal{B}(\mathbb{R}) \quad X^{-1}(A) \in \mathcal{F}$