

2. Сформулируем задачу в нере или прямоугольнике

$$F(x, y) = -3x^2 + y^2 - 7xy + 5x, \quad G(x, y) = -4xy - y^2 + 3y, \quad X = [0, 1]$$

ищем возможные ответы  $x(y)$ ,  $y(x)$

$$x(y): F'_x(x, y) = 0 \quad -6x - 7y + 5 = 0 \quad \bar{x} = \frac{-7y + 5}{6}$$

$$0 \leq \bar{x} = \frac{-7y + 5}{6} \leq 1 \Leftrightarrow -\frac{1}{7} \leq y \leq \frac{5}{7}$$

$$y(x): G'_y(x, y) = 0, \quad -4x - 2y + 3 = 0$$

$$0 \leq \bar{y} = \frac{-4x + 3}{2} \leq 1 \Leftrightarrow \frac{1}{4} \leq x \leq \frac{3}{4}$$

$$\bar{y} = \frac{-4x + 3}{2}$$

$$y(x) = \begin{cases} \frac{-4x + 3}{2}, & 0 \leq x \leq \frac{1}{4} \\ 0, & \frac{1}{4} \leq x \leq \frac{3}{4} \\ 0, & \frac{3}{4} \leq x \leq 1 \end{cases}$$



$$(x^0, y^0) = (0, 1), \left(\frac{5}{6}, 0\right)$$

$$\begin{pmatrix} x^0 \\ y^0 \end{pmatrix} \quad x(y^0) = x^0 \\ y(x^0) = y^0$$

$$\frac{-7y^0 + 5}{6} = x^0, \quad \frac{-4x^0 + 3}{2} = y^0$$