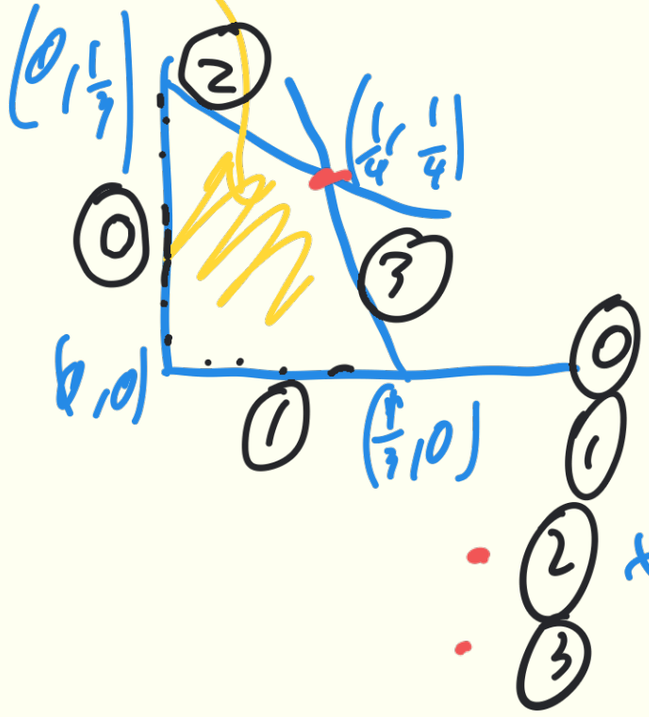
$$A = \begin{pmatrix} 3 & 1 \\ 1 & 3 \end{pmatrix} \qquad B = \begin{pmatrix} 1 & 3 \\ 3 & 1 \end{pmatrix}$$

$$P = \{ x \in \mathbb{R}^n \mid \begin{matrix} x \geq 0 \\ xB \leq 1 \end{matrix} \}$$



$$V = \{ (0,0), (\tfrac{1}{3}, 0), (0, \tfrac{1}{3}), (\tfrac{1}{4}, \tfrac{1}{4}) \}$$

$x_1 \geq 0$

$x_2 \geq 0$

$x_1 + 3x_2 \leq 1$

$3x_1 + x_2 \leq 1$

binding

$x_1 = 0$

$x_2 = 0$

$x_1 + 3x_2 = 1$

$3x_1 + x_2 = 1$

$(0,0) : \{0, 1\}$

$(\tfrac{1}{3}, 0) : \{1, 3\}$

$(0, \tfrac{1}{3}) : \{0, 2\}$

$(\tfrac{1}{4}, \tfrac{1}{4}) : \{2, 3\}$

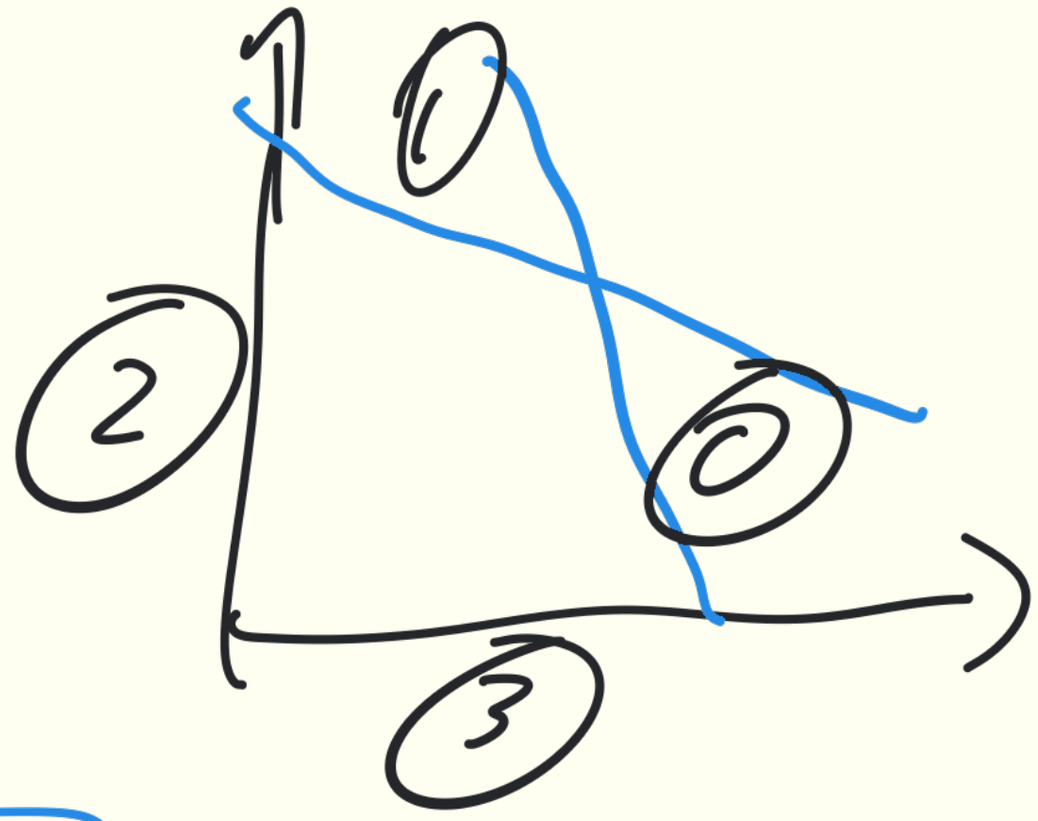
$A = \begin{pmatrix} 3 & 1 \\ 1 & 3 \end{pmatrix}$ $\quad Q = \{ y \in \mathbb{R}^n \mid Ay \leq 1 \;\; y \geq 0 \}$

$3y_1 + y_2 \leq 1$ ①

$y_1 + 3y_2 \leq 1$ ①

$y_1 \geq 0$ ②

$y_2 \geq 0$ ③



$(0,0)$	$\{2,3\}$
$(\frac{1}{3},0)$	$\{0,3\}$
$(0,\frac{1}{3})$	$\{1,2\}$
$(\frac{1}{4},\frac{1}{4})$	$\{0,1\}$