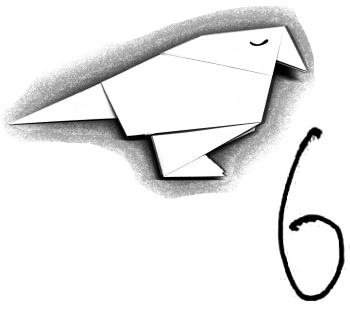


(1) Compute  $v = \begin{pmatrix} -1 & -2 \\ 0 & 2 \end{pmatrix} v_0$  with  $v_0 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$ . Draw the line  $D_1 : \begin{pmatrix} 3 \\ 3 \end{pmatrix} + \mathbb{R}v$ .

(2) Find  $u = \begin{pmatrix} u_1 \\ u_2 \end{pmatrix} \neq \begin{pmatrix} 0 \\ 0 \end{pmatrix}$  such that  $\begin{pmatrix} 2 & -1 \\ -4 & 2 \end{pmatrix} u = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$ . Draw the line  $D_2 : \begin{pmatrix} -1 \\ 0 \end{pmatrix} + \mathbb{R}u$ .

(3) Draw the line  $D_3 : y = -5$



8

5

7

4

9

2

0

1

3