

Task 3. Homography.

prob 5c)

$$\begin{aligned}\text{Column space } C &= \text{span} \left\{ \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix} \right\} \\ &= \text{span} \left\{ \begin{pmatrix} -1 \\ 2 \\ -2 \end{pmatrix}, \begin{pmatrix} 3 \\ 0 \\ 4 \end{pmatrix}, \begin{pmatrix} 3 \\ 6 \\ 1 \end{pmatrix}, \begin{pmatrix} 2 \\ 1 \\ 4 \end{pmatrix} \right\}\end{aligned}$$

NOT basis for $C \neq \text{span}$

$$\neq \text{span} \left\{ \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}, \begin{pmatrix} 3 \\ 2 \\ 0 \end{pmatrix} \right\}$$

problem 3.

Steven

Vanishy point 1: $-2.034e3, -1.284e3$

Vanishy point 2: $2.000e4, -2.213e4$

Vanishy line $(0.000297, 0.000308, 1)$

Do not say $(0, 0, 1)!!$

problem 7.

(Objects are placed at the
same plane!!)