$$\begin{pmatrix} EC_C & EC_B & EC_A \\ BC_C & BC_B & BC_A \\ FC_C & FC_B & FC_A \end{pmatrix} * \begin{pmatrix} a \\ b \\ c \end{pmatrix} = \begin{pmatrix} ECT \\ BCT \\ FCT \end{pmatrix} \rightarrow \begin{pmatrix} EC_C & EC_B & EC_A & ECT \\ BC_C & BC_B & BC_A & BCT \\ FC_C & FC_B & FC_A & FCT \end{pmatrix}$$

a)

$$\begin{pmatrix} 100 & 150 & 200 & 2150 \\ 20 & 30 & 50 & 470 \\ 0 & 10 & 20 & 150 \end{pmatrix}$$

$$Z_2 - \frac{1}{5} * Z_1 \implies \begin{pmatrix} 100 & 150 & 200 & 2150 \\ 0 & 0 & 10 & 40 \\ 0 & 10 & 20 & 150 \end{pmatrix}$$

$$Z_2 \leftrightarrow Z_3 \implies \begin{pmatrix} 100 & 150 & 200 & 2150 \\ 0 & 10 & 20 & 150 \\ 0 & 0 & 10 & 40 \end{pmatrix}$$

$c = \frac{40}{10} = 4$

$b = \frac{150 - 20*4}{10} = 7$

$a = \frac{2150 - 200*4 - 150*7}{100} = 3$

Flieger A = 3; Flieger B = 7; Flieger C = 4

b)

$$\begin{pmatrix} 100 & 150 & 200 & 1600 \\ 20 & 30 & 50 & 350 \\ 0 & 10 & 20 & 120 \end{pmatrix}$$

$$Z_2 - \frac{1}{5} * Z_1 \implies \begin{pmatrix} 100 & 150 & 200 & 1600 \\ 0 & 0 & 10 & 30 \\ 0 & 10 & 20 & 120 \end{pmatrix}$$

$$Z_2 \leftrightarrow Z_3 \implies \begin{pmatrix} 100 & 150 & 200 & 1600 \\ 0 & 10 & 20 & 120 \\ 0 & 0 & 10 & 30 \end{pmatrix}$$

$c = \frac{30}{10} = 3$

$b = \frac{120 - 20*3}{10} = 6$

$a = \frac{1600 - 200*3 - 150*6}{100} = 1$

Flieger A = 1; Flieger B = 6; Flieger C = 3