$$\begin{pmatrix} 8 & 7 & 6 \\ 3 & 4 & 2 \\ 5 & 3 & 1 \end{pmatrix} \quad r_1 = r_1/8 \quad = \quad \begin{pmatrix} 1 & \frac{7}{8} & \frac{3}{4} \\ 3 & 4 & 2 \\ 5 & 3 & 1 \end{pmatrix} \quad \begin{matrix} r_2 = r_2 - 3r_1 \\ \longrightarrow \\ r_3 = r_3 - 5r_1 \end{matrix}$$

$$\begin{pmatrix} 1 & \frac{7}{8} & \frac{3}{4} \\ 0 & -\frac{13}{8} & -\frac{1}{4} \\ 0 & -\frac{11}{8} & -\frac{11}{4} \end{pmatrix} \quad r_2 = r_2 / -\frac{13}{8} \quad \begin{pmatrix} 1 & \frac{7}{8} & \frac{3}{4} \\ 0 & 1 & \frac{2}{13} \\ 0 & -\frac{11}{8} & -\frac{11}{4} \end{pmatrix}$$

$$r_3 = r_3 - \frac{11}{8} r_2 \qquad \begin{pmatrix} 1 & \frac{7}{8} & \frac{3}{4} \\ 0 & 1 & \frac{2}{13} \\ 0 & 0 & -\frac{11}{4} \end{pmatrix} \quad r_3 = r_3 / -\frac{11}{4} \longrightarrow \begin{pmatrix} 1 & \frac{7}{8} & \frac{3}{4} \\ 0 & 1 & \frac{2}{13} \\ 0 & 0 & 1 \end{pmatrix}$$

$c_{2,1} = 3,3$

$r_1 = r_1 - \frac{2}{13} r_3$

$r_2 = r_2 - \frac{3}{4} r_3$

$$\longrightarrow \begin{pmatrix} 1 & \frac{7}{8} & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix} \quad c_{2,1} = 2,2 \quad r_1 = r_1 - \frac{7}{8} r_2 \quad \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$