Hello Gordon, how are you?

$$A = \left(\begin{array}{ccc|cc} 4 & 3 & 5 & 1 & 0 \\ 5 & 3 & 5 & 0 & -1 \\ \hline 1 & 0 & 0 & & \\ 0 & 1 & 0 & & \\ 0 & 0 & 1b & & \end{array}\right)$$

I am just very fine, thank you for asking.

$$\left(\begin{array}{cc|c} 1 & 2 & 3 \\ 4 & 5 & 6 \end{array}\right)$$

$$\begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{pmatrix}$$

$$\left(\begin{array}{cc|c} 1 & 2 & 3 \\ 4 & 5 & 6 \end{array}\right)$$

Erste Zeile
Zweite Zeile

$$\left(\begin{array}{ccc|cc} 4 & 3 & 5 & 1 & 0 \\ \cancel{5} & \cancel{333333} & \cancel{5} & \cancel{0} & \cancel{-1} \\ -1 & 0 & 0 & & \\ 0 & 1 & 0 & & \\ 0 & \sum_{i=1}^{n} i^2 & 1b & & \end{array}\right) \tag{1}$$

$$\begin{pmatrix} 4 & 3 & 5 & 1 \\ 5 & 3 & 5 & 0 \end{pmatrix} \tag{2}$$

$$\left(\begin{array}{ccc|cc} 4 & 3 & 5 & 1 & 0 \\ 5 & 3 & 5 & 0 & -1 \\ \hline -1 & 0 & 0 & & \\ 0 & 1 & 0 & & \\ 0 & 0 & 1b & & \end{array}\right)$$

Hello Gordon, how are you?

$$
\left(\begin{array}{ccc|cc}
4 & 3 & 4 & 1 & 0 \\
5 & 3 & 5 & 0 & 1 \\
\hline
1 & 0 & 0 & & \\
0 & 1 & 0 & & \\
0 & 0 & 1 & &
\end{array}\right)
\xrightarrow{\text{col}_1 \cdot (-1) \to \text{col}_3}
\left(\begin{array}{ccc|cc}
4 & 3 & 0 & 1 & 0 \\
5 & 3 & 0 & 0 & 1 \\
\hline
1 & 0 & -1 & & \\
0 & 1 & 0 & & \\
0 & 0 & 1 & &
\end{array}\right)
\xrightarrow{\text{col}_2 \cdot (-1) \to \text{col}_1}
\left(\begin{array}{ccc|cc}
1 & 3 & 0 & 1 & 0 \\
2 & 3 & 0 & 0 & 1 \\
\hline
1 & 0 & -1 & & \\
-1 & 1 & 0 & & \\
0 & 0 & 1 & &
\end{array}\right)
\begin{array}{l} \text{row}_1 \cdot (-2) \to \text{row}_2 \end{array}
$$

$$
\longrightarrow
\left(\begin{array}{ccc|cc}
1 & 3 & 0 & 1 & 0 \\
0 & -3 & 0 & -2 & 1 \\
\hline
1 & 0 & -1 & & \\
-1 & 1 & 0 & & \\
0 & 0 & 1 & &
\end{array}\right)
\begin{array}{l} \text{row}_2 \cdot (+1) \to \text{row}_1 \quad \mid \cdot (-1) \end{array}
\longrightarrow
\left(\begin{array}{ccc|cc}
1 & 0 & 0 & -1 & 1 \\
0 & 3 & 0 & 2 & -1 \\
\hline
1 & 0 & -1 & & \\
-1 & 1 & 0 & & \\
0 & 0 & 1 & &
\end{array}\right)
$$

I am very fine, thank you for asking.

Hallo ~~wie geht es dir heute~~.

$$
\left(\begin{array}{ccc|c}
1 & 2 & 3 & 4 \\
5 & 6 & \text{-}7 & 8 \\
\hline
9 & 10 & 11 &
\end{array}\right)
$$

[Arrow from column 1 to column 2 above the matrix; arrow from row 1 to row 3 at the right.]