Consider the following linear programming problem:

$$\begin{aligned}
\text{maximize} \quad & z = 2x_1 + 3x_2 \\
\text{subject to} \quad & x_1 + 4x_2 \le 40 \\
& 3x_1 + 2x_2 \le 30 \\
& 3x_1 + x_2 \le 24 \\
& x_1,\ x_2 \ge 0
\end{aligned}$$

Adding slacks this is equivalent to:

$$\begin{aligned}
\text{maximize} \quad & z = 2x_1 + 3x_2 + 0x_3 + 0x_4 + 0x_5 \\
\text{subject to} \quad & x_1 + 4x_2 + x_3 = 40 \\
& 3x_1 + 2x_2 + x_4 = 30 \\
& 3x_1 + x_2 + x_5 = 24 \\
& x_1,\ x_2,\ x_3,\ x_4,\ x_5 \ge 0
\end{aligned}$$

If we denote by B the columns of the A matrix corresponding to basic variables $\{x_1, x_2, x_5\}$, then above system of equations is equivalent to that obtained by multiplying by B^{-1}:

$$\begin{aligned}
\text{maximize} \quad & z = 35 + 0x_1 + 0x_2 - 0.5x_3 - 0.5x_4 + 0x_5 \\
\text{subject to} \quad & x_1 - 0.2x_3 + 0.4x_4 = 4 \\
& x_2 + 0.3x_3 - 0.1x_4 = 9 \\
& 0.3x_3 - 1.1x_4 + x_5 = 3 \\
& x_1,\ x_2,\ x_3,\ x_4,\ x_5 \ge 0
\end{aligned}$$

This is equivalent to:

$$\begin{aligned}
\text{maximize} \quad & z = 35 - 0.5x_3 - 0.5x_4 \\
\text{subject to} \quad & -0.2x_3 + 0.4x_4 \le 4 \\
& 0.3x_3 - 0.1x_4 \le 9 \\
& 0.3x_3 - 1.1x_4 \le 3 \\
& x_3,\ x_4 \ge 0
\end{aligned}$$

The solution to this (equivalent) linear program is obvious!