A Two-Phase Method Linear Programming Example

We will apply the two-phase method in order to solve the following linear program. Remember, Phase I will help determine the initial starting basic feasible solution for Phase II.

$$\text{minimize } 7x_1 - 9x_2 + 4x_3$$

subject to (LP)

$$
\begin{aligned}
x_1 + 18x_2 - 2x_3 &\leq 9 \\
x_1 + x_2 - 3x_3 &= 1 \\
x_1, x_2, x_3 &\geq 0
\end{aligned}
$$