Weidenbach   **January 16, 2025**

**Tutorials for "Automated Reasoning WS24/25"
Exercise sheet 11**

Exercise 11.1:
Consider the below sets of inequations and apply the simplex algorithm to it:

$$
\begin{aligned}
x &\geq 0 \\
x + y &\geq 1 \\
x + 2y &\geq 1 \\
x - y &\geq 2
\end{aligned}
$$

Exercise 11.2:
Consider the below sets of inequations and apply the simplex algorithm to it:

1.
$$
\begin{aligned}
x &\geq 0 \\
x + y &\geq 1 \\
x + 2y &\leq -1 \\
x - y &\geq 0
\end{aligned}
$$

2.
$$
\begin{aligned}
2x + 5y &\leq -17 \\
3x + 7y &\leq -24 \\
2x + 5y &\geq -17 \\
3x + 7y &\geq -24
\end{aligned}
$$

It is not encouraged to prepare joint solutions, because we do not support joint exams.