

Solve the following linear program both graphically and algebraically using the Simplex method.

$$\begin{array}{ll}\text{Maximize} & 2x_1 - x_2 \\ \text{Subject to} & 2x_1 - x_2 \leq 4 \\ & x_1 \leq 3 \\ & x_1, x_2 \geq 0\end{array}$$