

Extra Review Problems

Linear Programming

1. (Short answer / multiple choice)

(a) Which of the following algorithms solve a linear program in polynomial time?

- ☐ The Simplex Algorithm
- ☐ The Ellipsoid Algorithm
- ☐ Karmarkar's Algorithm

(b) Convert this LP into standard form

$$\begin{array}{ll}\text{minimize} & x_1 - 5x_2 + 3x_3 \\ \text{s.t.} & 5x_1 + 4x_2 - x_3 \geq 6 \\ & 3x_1 + 2x_2 + x_3 \leq 4 \\ & x_1, x_2 \geq 0\end{array}$$