

19. Use the Simplex algorithm to solve

$$\left\{ \begin{array}{l} 5x_1 + 4x_2 + 3x_3 + 2x_4 \rightarrow \max \\ x_1 + 2x_2 + x_4 \leq 1 \\ x_1 + x_2 + 2x_3 \leq 2 \\ x_1 + 2x_3 + 2x_4 \leq 3 \\ x_1, x_2, x_3, x_4 \geq 0. \end{array} \right.$$

20. Work on problems 1–3 of Section 4.3 in the textbook.

21. Work on problems 1–2 of Section 4.4 in the textbook.

22. Work on problem 2 of Section 4.5 in the textbook.