

Do 4 of the following 5 problems.

Other interesting problems: 3.2, 3.3, 3.5, 3.6, 3.8, 3.10, 3.13

1. Exercise 3.1
2. Exercise 3.4
3. Exercise 3.9
4. Exercise 3.12. In part (b), you may solve using any implementation of simplex: revised or tableau.
5. A farmer has 100 acres of land which he has decided to make part arable and part grass. Part of the land may also lie fallow (unused). He can make an annual profit of \$150/acre from arable land and \$100/acre from grass. Each year arable land requires 25 hours work per acre, and grass requires 10 hours work per year. The farmer does not want to work more than 2000 hours in any year. How should he divide his land between arable and grass so as to maximize his annual profit? Model this problem as a linear program, and then solve using the simplex algorithm.