Exercise 11

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11.1.1

The question can be formulated as a LP:

$$\arg\max_x c^T x \tag{1}$$

$$s.t. \tag{2}$$

$$e^T x = 40 \tag{3}$$

$$x \leq d \tag{4}$$

$$x = (x1, x2)^T, c = (2.5, 3.0)^T, e = (1/2, 1/1.4)^T, d = (60, 40)^T \tag{5}$$

x is the amount of cherries and apples plucked. c is the profit. e is the effort to pluck 1kg. d is the maximum demand.

11.1.2

The optimal solution is selling 60kg of cherries and 14kg of apples. The profit then amounts to 192€.