

## Lesson 8. Production Process Models, cont.

**Problem.** Alvin Fine produces three perfumes from raw material. Thirty thousand ounces of raw material is available. Each ounce of raw material can be transformed into 0.4 ounces of perfume 1, 0.3 ounces of perfume 2, and 0.2 ounces of perfume 3, while 0.1 ounces is lost as waste material. Each ounce of perfume 1 can be further processed into 0.6 ounces of perfume 2, 0.3 ounces of perfume 3, and 0.1 ounces of waste material. Alvin Fine has been contracted to produce at least 4000 ounces of perfume 1, 8000 ounces of perfume 2, and 10000 ounces of perfume 3. Because of its environmental initiatives it wishes to minimize waste material. Formulate a linear program that determines how much perfume to produce while minimizing waste.