

Example: 3.9 (Brute and Chanelle)

Rylon Corp manufactures Brute and Chanelle perfume. The raw material needed to manufacture each type of perfume can be purchased for \$3 per pound. Processing 1 lb of raw material requires 1 hour of lab time. Each pound of processed material yields 3 oz of Regular Brute, and 4 oz of Regular Chanelle. Regular Brute can be sold at \$7 per oz, and Regular Chanelle for \$6 per oz. Rylon also has the option of further processing Regular Brute and Regular Chanelle to produce Luxury Brute and Luxury Chanelle, which can be sold for \$18 per oz, \$14 per oz respectively. Each oz of Regular Brute processed further requires an additional 3 hours of lab time and \$4 processing cost to yield 1 oz of Luxury Brute. Each oz of Regular Chanelle processed further requires 2 hours of lab time and \$4 processing to get 1 oz of Luxury Chanelle. Each year, Rylon has 6000 hours of lab time available and can purchase up to 4000 lb of raw material. Formulate an LP that can be used to determine how Rylon can maximize profits.

Next Example: Chemco