The Ace Novelty Company received an order from Magic World Amusement Park for 900 Giant Pandas, 1200 Saint Bernards and 2000 Big Birds. Ace’s management decided that 500 Giant Pandas, 800 Saint Bernards, and 1300 Big Birds could be manufactured in their Los Angeles plant, and the balance of the order could be filled by their Seattle plant. Each Panda requires 1.5 square yards of plush, 30 cubic feet of stuffing, and 5 pieces of trim; each Saint Bernard requires 2 square yards of plush, 35 cubic feet of stuffing, and 8 pieces of trim; and each Big Bird requires 2.5 square yards of plush, 25 cubic feet of stuffing and 15 pieces of trim.

a. Organize the information into 2 matrices.

b. Find out how much of each type of material must be purchased for each plant.

c. Find out what the total cost of materials incurred by each plant and the total cost of materials incurred by Ace Novelty will be if the plush costs $4.50 per square yard, the stuffing costs 10 cents per cubic foot and the trim costs 25 cents per unit.