

1. Sceret Recipe make cakes and pastries. On a Monday morning they have to make "Chocolate cake" and "Fruit pastries". They have 155 units of flour and they use 6 units of flour per cake and 4 units per pastry. They also have 4 units of time in the oven that day and each cake requires 4 units in the oven and each pastry requires 3 units of time in the oven. They sell each cake for RM 75 and each pastry for RM 40. How many cakes and pastries they should make to maximize their sale?

2. Petronas produces two products, Petrol and Diesel. The sales volume for Petrol is at least 80% of the total sales of both Petrol and Diesel. However, the company cannot sell more than 100 units of Petrol per day. Both products use one raw material, of which the maximum daily availability is 240 kg. The usage rates of the raw material are 2 kg per unit of Petronas and 4 kg per unit of Diesel. The profit units for Petrol and Diesel are RM 20 and RM 50, respectively. Determine the optimal product mix for the Petronas.