

Homework (01)

Exercise (1):

Consider a company that manufactures two types of trucks (types A and B). This company is divided into three workshops, workshop (1) manufacturing the engines, workshop (2) manufacturing the bodies, workshop (3) being in charge of assembly. The unit times for each of the three operations and for each type of truck are given in the following table:

workshops	A-type trucks	B-type trucks
(1) engines	1h	3h
(2) the bodies	2h	1h
(3) assembly	1h	1h

In addition, the study of the production capacities of the 3 workshops revealed that in one month, 450 hours of work could be used in workshop (1), 350 hours in workshop (2), 200 in workshop (3).

Finally, it is known that the unit profit made by the company on type A trucks is 4000 and that made on type B trucks is 8000.

The question is: what must be the monthly production of trucks of each type to make the profit of the company the greatest possible? (Use the graph method).

Exercise (2):

We must organize an airlift to transport 1600 people and 90 tons of luggage. The aircraft available are of two types: 12 of type (A) and 9 of type (B). Type (A) can carry, fully loaded, 200 people and 6 tons of luggage. Type (B), 100 people and 6 tons of luggage. Renting a type (A) aircraft costs 800,000 D; renting a type (B) aircraft costs 200,000 D.

Solve this problem graphically in order to reduce costs