Profit and Storage Problem

You are hired as category manager of Perishable items in Amazon. You are responsible to make this category profitable. After joining the company, you asked for the historical data to find any scope of optimization to increase the utilization of resources to make this category profitable. Here is the list of the tables you extracted from the database.

	Fruits	Raw Butter	Chicken	Veggies	Bread
Sales price per lot(INR)	200	422	352	78	45
Cost Price per lot(INR)	190	402	322	48	40
Storage per lot (unit area)	1	5	20	30	0.5
Loss per lot (INR)	2	5	10	8	1

You observed that the current capacity of the storage unit is 1000 unit area. You are required to place an order to buy stock inventory of these 5 items from one of your vendors. How much quantity you are going to order for every item to maximize profit and optimize. (You can assume all the items are out of stock and you are building fresh inventory)

Covid Vaccine Distribution

You are the distribution head of one of the Covid Vaccine manufacturers producing vaccines from India, Nepal and Malaysia. In the pandemic, you got a purchase order from the USA, China and Germany. The details of the order are available in the table

Country	QTY (in millions)
Germany	200
USA	200
China	200

The research centers of your company in India, Malaysia and Nepal can produce total 600 vaccines per month. Country-wise production capacity is available in the following table.   .

Country	Supply
Nepal	100
Malaysia	200
India	300

The unit cost (including shipping and taxes) to ship the vaccines to order country from manufacturing countries is available in the following table

Unit Cost	Germany	USA	China
Nepal	480	564	960
Malaysia	689	432	696
India	288	732	852

You need to create a distribution strategy that will minimize the cost associate to produce and deliver these vaccines to the customers in a month.