Exercises to logistics

Exercise 1

A company has calculated the following values for its products

Item	Description	Price per unit	Sales per year	CM per unit	Avg. days on stock
1	Transmission	3.650,00	80	1.800,00	13
2	Braking system	5.800,00	140	3.800,00	30
3	Front door	1.900,00	27	800,00	8
4	Engine	6.700,00	20	4.600,00	8
5	Clutch	1.050,00	168	400,00	35
6	Front fender	775,00	202	350,00	40
7	Gears no. 2000	125,00	400	40,00	50
8	Rear axle	4.000,00	100	1.300,00	20
9	Camshaft	2.100,00	25	900,00	8
10	Brake fluid	50,00	600	30,00	80

The company has defined its A products as 20 % of the items which gives the largest contribution margin. The B products are defined as the next 30 % of the products that give the next largest contribution margin. The C products are the last 50% of the products which gives the lowest contribution margin.

Exercise 1.1:
Please create an ABC analysis for the company and comment on the results

Exercise 1.2:
Please explain how this ABC analysis can be used in relation to the logistics of the organisation

Exercise 2:

A company is using a component in its production which has a cost price of $48 per unit - free delivery. The company is producing 40,000 units throughout the year.

Inventory costs are 15% per annum of the average inventory value and each order of new components is $300.

Exercise 2.1:
Calculate how many components the company should buy each time – the optimal order size.

Exercise 2.2:

Which consequences would a 10% increase in cost price per unit have on the optimal order size (please show your calculations)?

Exercise 2.3

Which consequences would a 50% decrease in costs per order have on the optimal order size (please show your calculations)?

Exercise 2.4

Please specify the conditions for the answer to 2.1 and discuss the realism of the conditions.