Break Even point and O.L.

1. A company´s annual fixed costs are €2,000. The variable cost per unit equals its selling price, which is €2. What is the break-even point?

2. A company has a unit margin of €5.
a) Assuming that the manufacturing of 500 physical units produces a loss of €500, calculate the break-even point.
b) Represent graphically the situation of this company assuming that the maximum capacity of the plant is 900 physical units. What is the maximum profit that can be obtained?
c) Calculate the degree of operating leverage of this company for a production andsales volume of 900 physical units and interpret this result.

3. A company manager who wants to market a new product has to choose between two alternative production processes A and B. In both cases the selling price of the product is €20

	Process A	**Process B**
Fixed costs	40,000	20,000
Unit variable costs	13	15

a) Assuming that the expected level of production and sales is 10,000 physical units, decide the most convenient process according to the break-even analysis and the graphic representation.
b) If process B resulted in a higher quality product with a selling price of €25, how would this affect the choice of the most convenient process?
c) If the rise in price of the product obtained with process B (€25) caused a drop in sales from 10,000 to 6,000 physical units, which production process would thecompany choose?

4. Given the following information:
- Selling price: €10.
- Variable cost per unit: €3.
- Fixed costs: €1,000.

a) How many units must be sold to start making a profit?
b) What would the profit be if the company sold 200 units?
c) What is the degree of operating leverage for 200 units sold?
d) Will the degree of operating leverage vary if there is a 50 unit increase in sales?
e) Will the degree of operating leverage vary if there is a 10% rise in price (for 200 units) ?

5. A visit to a company has provided the following information:
- If the company produced and sold 300 physical units, it would make a profit of €56.

- If the company produced and sold 160 physical units, it would make zero profit.
- The company forecasts sales of 500 physical units.

Calculate the company´s fixed costs, the forecast profit, its safety margin and the degree of operating leverage.

6. En las On the financial pages of a Spanish newspaper it was recently announced that a manufacturing company specialized in certain automotive components had sold 100,000 units of its product last year, well above its break-even point, set at 20,000 physical units approximately. What is the degree of operating leverage for this company?

7. We have the following data corresponding to a certain product manufactured by Sumun S.A:
- Unit margin: €10
- Annual sales volume: 2,000 units
- Annual fixed costs: €1,000

Calculate:
a) The break-even point of this product.
b) Its degree of operating leverage.

8. Company ENIR, S.A., a black cigarette manufacturer, has not obtained profits during year 2008. It was established two years before and its maximum production capacity amounts to 11 million packs per year. Analyzing its management, we know that in 2008, the company produced 10 million packs, with financial costs relative to its external financing of €300,000, fixed costs of commercialization and administration of €1,000,000 and other fixed costs of €1,700,000.
The selling price was €1.3 per pack, which was established by the Government, as this is an industry regulated by the State.
For the following year 2009 and, maintaining the same facilities, the company expects an increase of 15% in its fixed costs, as well as a decrease of 1% in the variable cost per unit.
Calculate:
a) The break-even point for year 2009.
b) Considering these plans, is it possible that the company obtains profits? Account for your answer.