**Costs of Production**

*Unit 4.2 Questions*

1. Betty Marshall runs a small jewelry shop in Havanna, producing necklaces. She has the following monthly costs:
   1. Rent - $300
   2. Jewels - $150 per necklace
   3. Machinery - $30
   4. Monthly Wage - $100
   5. String - $5 per necklace
   6. Electricity - $40
   7. Beads - $10 per necklace

Which of her costs are fixed and which are variable?

1. If she produced 100 necklaces what would her fixed costs be?
2. If she produced 100 necklaces what would her variable costs be?
3. What are her Total Costs when producing 1 necklace?
4. What are her Total Costs when producing 319 necklaces?
5. Fill in the table below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Necklaces produced | Fixed Costs $ | Variable Costs $ | Total Costs | Average Costs |
| 0 |  |  |  |  |
| 50 |  |  |  |  |
| 100 |  |  |  |  |
| 200 |  |  |  |  |
| 300 |  |  |  |  |
| 400 |  |  |  |  |
| 500 |  |  |  |  |

1. Draw the above table out on a graph, **without Average Costs**. Be careful with scale. You may need to break scale in order to fit everything in (for example, go up in 100s until 500, and then go up in 5000s)!
2. Imagine her costs looked as they do below. If Ms Marshall charged $80 per necklace, fill in the table below

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number of Necklaces sold** | **Total Revenue** | **VC** | **FC** | **Total Costs** | **Profit/Loss** |
| 0 |  | 0 | 200 |  |  |
| 5 |  | 350 |  |  |  |
| 10 |  | 500 |  |  |  |
| 20 |  | 700 |  |  |  |
| 30 |  | 900 |  |  |  |
| 40 |  | 2000 |  |  |  |

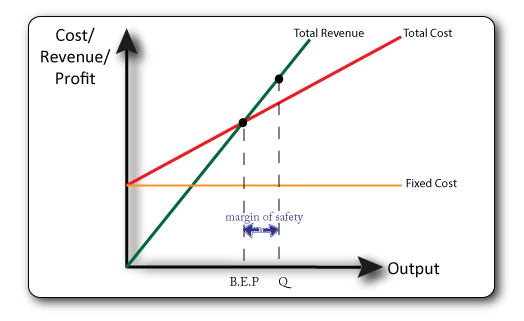
1. Draw Total Revenue and Total Costs out on a graph
2. Mark in the area of profit/loss
3. Mark the break-even point on your graph
4. Would the firm have to shut down in the short run if producing 5 units? Explain your answer
5. What is the margin of safety (roughly) when the company is producing 30 necklaces?
6. If fixed costs increased by $100, show this would affect the curves on your diagrams.
7. What effect does this have on the break even point?

**Revision Card Summary**

|  |  |
| --- | --- |
| Fixed Costs |  |
| Variable Costs |  |
| Average Costs |  |
| Total Costs |  |
| Break even point |  |
| Margin of Safety |  |
| Total Revenue |  |
| Profit |  |
| Loss |  |

**Costs of Production Extension**

*Unit 4.2 Extension Questions*

1. Look at the break even chart below. Explain what would on the chart if:   


* 1. Prices rose for the company
  2. Rent rose for the company
  3. The company sold fewer units
  4. The company’s production costs fell

1. Explain **three** limitations of a break-even chart [6]