Task 1

**Read the following excerpt and answer Questions 1a and 1b. Note: This question does not focus on the price elasticity of demand for milk overall. It concentrates on the price elasticity of demand for milk supplied by Harrison in particular.**

Harrison owns a dairy farm in Western Victoria. There are about 1,500 dairy farms in the same region. All dairy farms here, Harrison’s included, sell milk at the price of 50 cents per litre. The buyers are Woolworths and Coles, the two biggest supermarket chains in Australia. Last month, Harrison decided to raise his price to 55 cents per litre while his competitors kept the price unchanged. After raising his price, Harrison noticed that his buyers stopped doing business with him. Consequently, Harrison’s sales last month crashed to zero.

**Question 1a. What you can say about the price elasticity of demand for Harrison’s milk? Clearly explain. Note: This question does not focus on the price elasticity of demand for milk overall. It concentrates on the price elasticity of demand for milk supplied by Harrison in particular. (0.5 marks)**

**Question 1b. How would you illustrate the demand curve for Harrison’s milk on a graph? Excel graphs, no hand drawn graphs permitted. (0.5 marks)**

Task 2

**Answer Questions 2 a, b and c as well as Question 3 using the information provided in the following table and excerpt.**

Oscar runs a small coffee shop close to Glenferrie station. In the short run, Oscar will not have the funds to upgrade the coffee shop with additional machines and equipment. The following table shows how the quantity of coffees Oscar can sell per day depend on the number of staff he hires. Oscar pays each staff member $200 per day and the shop's rent is $2100 per month or $70 per day.   
For the purpose of simplicity, assume wages and rent are the only two costs in Oscar's daily business.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Table: Oscar's expenses* | | | | | | |
| **Quantity of staff** | **Quantity of coffees made** | **Fixed cost (rent)** | **Variable cost (wages)** | **Total cost** | **Average total cost** | **Marginal cost** |
| 0 | 0 | $70 | 0 | $70 |  |  |
| 1 | 30 | $70 | $200 | $270 |  |  |
| 2 | 70 | $70 | $400 | $470 |  |  |
| 3 | 130 | $70 | $600 | $670 |  |  |
| 4 | 170 | $70 | $800 | $870 |  |  |
| 5 | 200 | $70 | $1000 | $1070 |  |  |

**Question 2a.** Calculate the average total cost and fill in the average total cost in the table. (0.5 marks)

**Question 2b.** Calculate the marginal cost fill in the marginal cost column in the table. (0.5 marks)

**Question 2c.**For the first three employees, marginal cost keeps decreasing. However, from employee number 4, the marginal cost begins and continues to rise. Clearly explain why it is the case. (1 mark)

Task 3

**Use the data from Question 2, to answer the following:**

**Question 3a.**Graph the marginal cost (MC) curve and the average total cost (ATC) curve on a diagram. Remember to label the curves and the axes fully. (0.5 marks)

**Question 3b.**State clearly the relationship between marginal cost and average total cost. (0.5 marks)

#### Task 4

**Read the following excerpt and answer Questions 4a and 4b. Note:**

In November 2020, the Reserve Bank of Australia (RBA) cut the cash rate to a record low of 0.1%. The RBA also announced that commercial banks would be allowed to borrow from the RBA for three years at an interest rate of 0.1% via the so-called 'Term Funding Facility'. Both these moves curbed the costs of borrowing for commercial banks substantially.   
  
For simplicity's sake, assume that there are only two commercial banks operating: Commonwealth Bank (CBA) and Westpac. Westpac is contemplating whether to pass the cuts in its borrowing costs to its home loan customers, i.e., reduce the interest rate charged on home loans. Also, please note that a key characteristic that sets oligopoly apart from other market structures is the fact that firms in an oligopolistic market are interdependent.

**Question 4a**. Suppose you are the chief economic adviser at Westpac. Would you suggest Westpac cut its home loan interest rates? What are the factors you must put under consideration? (0.5 marks)

**Question 4b**. Unlike the other three market structures, we do not analyse firms in an oligopoly market using graphs, i.e. firm diagrams. We have to employ a different analysis technique called game theory. In your own words, clearly explain why it is not possible to draw graphs to illustrate a firm operating in an oligopoly market. (Hint: It is tied with the fact that firms in an oligopoly market are interdependent).(0.5 marks)