

**BUSINESS FINANCE**

**20 FEBRUARY 2014**



**Lesson Description**

In this lesson we

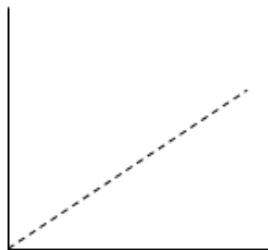
- Introduced and do calculations with regards to:
  - Various Tariff Structures
  - Income and Expenditure
  - Profit and Loss
  - Cost Price and Selling Price
  - Break-even Analysis



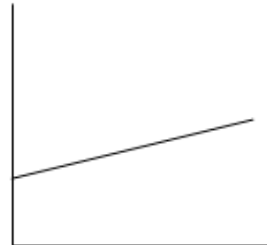
**Summary**

1. Tariff systems can be illustrated on a graph as follows:

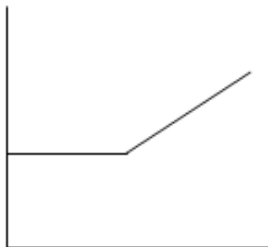
**Graph A**



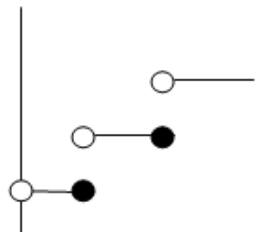
**Graph B**



**Graph C**



**Graph D**



With regards to Cell Phones:

- **Graph A** – Pay-As-You-Go
  - **Graph B** – Contract with no free minutes and a constant charge per minute
  - **Graph C** – Contract with free minutes and then a constant charge per minute, once the free minutes have been used
  - **Graph D** - Per minute Billing
2. Profit = Income – Expense  
 Income = Profit + Expense  
 Expense = Income – Profit

notes for...

$$3. \quad \% \text{ increase / decrease} = \frac{\text{difference in the price}}{\text{original price}} \times 100$$

OR

$$\% \text{ profit increase} = \frac{\text{selling price} - \text{cost price}}{\text{cost price}} \times 100$$



## Test Yourself

Consider the following information when answering questions 1 to 4.

A particular cell phone company offers 3 different packages:

- **Package 1** – No contract: R2,15 per minute or part thereof
- **Package 2** – Contract of R225 a month plus R1,50 per minute or part thereof
- **Package 3** – Contract of R300 a month. 100 free minutes a month. Thereafter R0,95 per minute or part thereof.

### Question 1

Per minute or part thereof means that if a client talks for 1 minute and 3 seconds he will be charged:

- A. for 63 seconds
- B. for 1 minute
- C. for 2 minutes
- D. for 3 seconds

### Question 2

A client makes 159 minutes worth of calls in a specific month. What will his bill be if he made use of Package 1?

- A. R342,00
- B. R341,85
- C. R159,00
- D. R2,15

### Question 3

A client makes 159 minutes worth of calls in a specific month. What will his bill be if he made use of Package 2?

- A. R238,50
- B. R225,00
- C. R436,50
- D. R24 075,00

### Question 4

A client makes 159 minutes worth of calls in a specific month. What will his bill be if he made use of Package 3?

- A. R300,00
- B. R451,05
- C. R356,05
- D. R56,05

Consider the following when answering questions 5 - 10

Jimbo has a Pizza shop. Consider the table below which shows the income and expenses for a particular month:

Rent	R4500
Vehicle Payments	R3100
Petrol	R4234,50
Ingredients	R6542,29
Electricity	R2018,56
Water	R421,78
Salaries	R9600
Sales	R42365,50

### Question 5

How much does the water cost this month?

- A. R2 018,56
- B. R9 600,00
- C. R421,78
- D. Not known

### Question 6

What cost the company R4 234,50 during this month?

- A. Sales
- B. Petrol
- C. Water
- D. Vehicle payments

### Question 7

If three people are employed, determine their individual salary if each earns the same amount.

- A. R9 600,00
- B. R4 800,00
- C. R3 200,00
- D. R2 400,00

### Question 8

List all the fixed expenses:

- A. Sales
- B. Rent, vehicle repayments, petrol, salaries
- C. Ingredients, petrol, electricity, water
- D. Rent, vehicle payments, salaries

### Question 9

Calculate the total expenses.

- A. R72 782,63
- B. R42 365,50
- C. R30 417,13
- D. R20 817,13

**Question 10**

Determine the profit margin (to one decimal place) if:

$$\text{Profit Margin} = \frac{\text{Profit}}{\text{Expenses}} \times 100$$

- A. 239,28%
- B. 139,28%
- C. 39,28%
- D. 28,20%

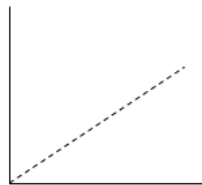


**Improve your Skills**

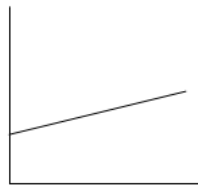
**Question 1**

Link each Graph (A – E) with one of the statements (1 – 5) which best describes the graphs.  
Example: Graph F – Statement 8

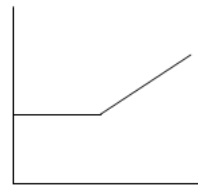
Graph A



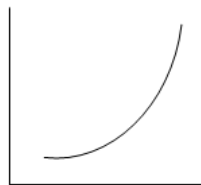
Graph B



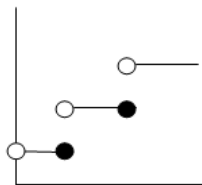
Graph C



Graph D



Graph E




- **Statement 1** – A cell phone contract with no free minutes
- **Statement 2** – The cost of apples (R1,25 per apple)
- **Statement 3** – The charges involved with a parking lot
- **Statement 4** – The cost of a taxi hire with the first 5km at a set fee, thereafter every km is an additional charge.
- **Statement 5** – Constant Rate

(5)

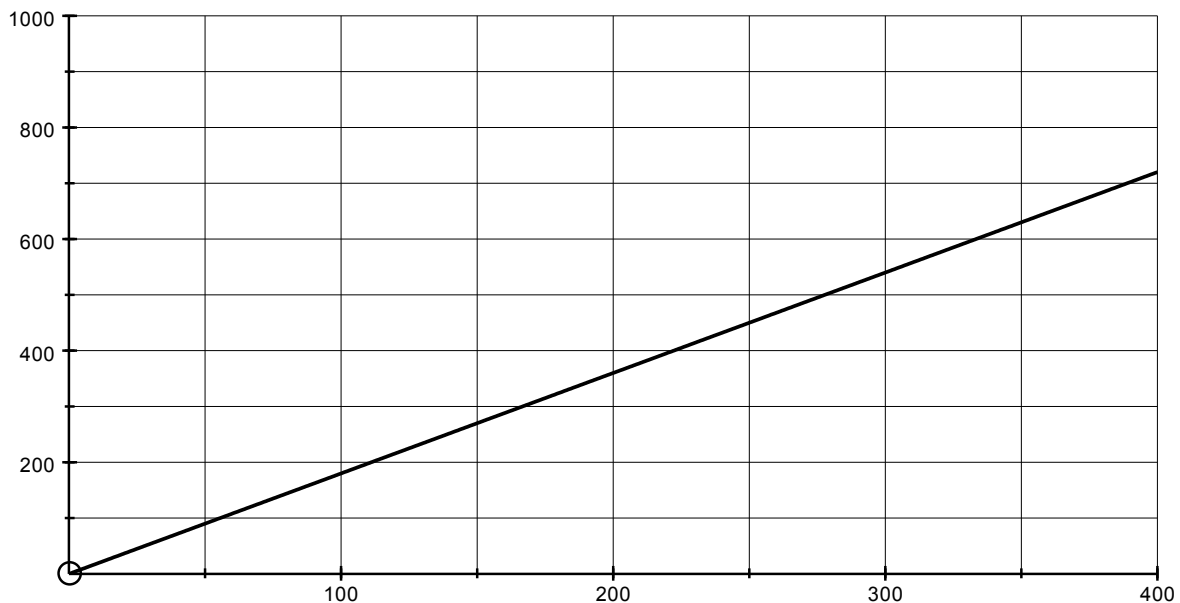
notes for...

**Question 2**

James wants to buy a cell phone which he will use for business during peak hours. He has one of two options:

<p><b>Option 1</b> No contract fee R1,80 per minute for peak calls</p>	
<p><b>Option 2</b> A monthly contract fee of R150 50 free peak minutes R1,20 per minute for peak calls</p>	

2.1 Below is a sketch which represents one of the options.



2.1.1 Is Option 1 or Option 2 represented by the graph. Give a reason for your answer. (2)

2.1.2 Use the graph above to answer the following:

- a) What would a suitable label for the horizontal (x) axis be? (1)
- b) What would be a suitable name for the vertical (y) axis be? (1)
- c) How many minutes did James talk for if he received a bill for R350? (2)
- d) How much would James pay if he spoke for 275 minutes? (2)

2.2 Write a formula which shows the monthly cost (C) of a phone bill that includes the monthly contract (if applicable) and the number of minutes (m) spoken in a month for option 1. (3)

2.3 On the set of axes, found on page 5, sketch a graph that represents the other option that is not already illustrated. (5)

2.4 Determine accurately how much Mr A's monthly phone bill will be if he makes a total of:

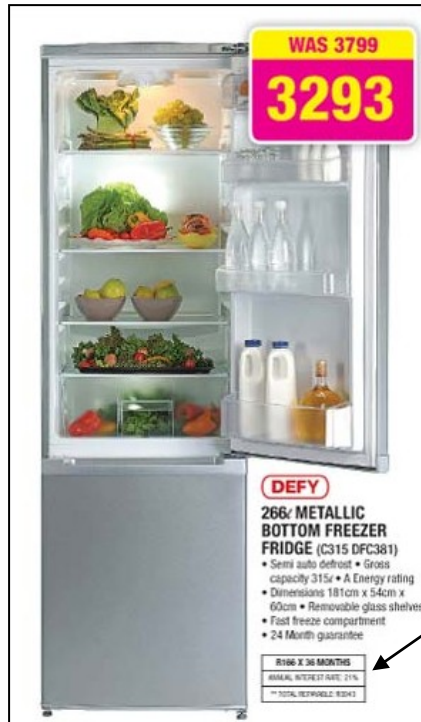
2.4.1 103 minutes worth of calls using Option 1 (2)

2.4.2 103 minutes worth of calls using Option 2 (4)

notes for...

**Question 3**

Consider the following advert:



15% deposit  
R166 a month for 3 years  
R7,50 a month admin fees

- 3.1 The cash price for the fridge is R3 293. Before the discount it was R3 799.
- 3.1.1 If one were buying the fridge for cash, what saving (in Rands) would one make? (2)
- 3.1.2 Using the formula below, determine the percentage discount, rounding to 2 decimal places. (4)

$$\text{Percentage Discount} = \frac{\text{Difference in Price}}{\text{Original Price}} \times 100$$

- 3.2 If one never had the cash to buy the fridge, how much would the fridge cost in total if buying it on Hire Purchase? (8)

### Question 4

Consider the following table which shows the costs of water in a specific Municipality.

#### Water Tariffs

Water Used	*Tariff per Kilolitre
0 – 6kl	Free / kl
More than 6kl up to and including 15kl	R8,95 / kl
More than 15kl up to and including 20kl	R13,80 / kl
More than 20kl up to and including 30kl	R22,95 / kl
More than 30kl	R32,50 / kl

#### Monthly Fee

Water Used	*Monthly Tariff
0 – 6kl	Free
More than 6kl	R89,95

\*All prices exclude 14% VAT

- 4.1 Calculate the cost (excluding VAT) for using 27kl of water. (9)
- 4.2 Determine the final bill if the 14% VAT needs to be added to your answer above. (2)
- 4.3 A particular person got a water bill of R0,00 one month. Does this mean the person used no water that month? Explain. (3)