

## ESTIMATING THE LEARNING CURVE EFFECTS

### PRACTICE QUESTIONS

#### a) Cumulative Doubling Method (Tabular)

*Question 1: The first unit of output of a certain new product requires 100 hours and an 80% learning curve applies.*

*Required; Compute the total time of producing the 4th and 8th unit of this same product.*

#### b) Mathematical method

#### **Question 2:**

Ivys' Ltd has anticipated a 95% learning curve towards production of a new item. The 1st item will cost Ugx 2,000 in materials, and will take 400 labour hours. The cost per labour hour is Ugx 5. Overheads are 50% of labour.

**Required; Compute the total cost for the first item and the first 8 items.**

#### **Question 3:**

Apex Ltd has anticipated a 80% learning curve towards the production of a new product. The 1st unit will require 500 labour hours. Material cost per unit is Ugx1,800. Labour is paid at Ugx6 per hour. Overheads are charged at 40% of labour cost.

Required:

Compute:

- a) Compute the total time of producing the 4th and 8th unit of this same product.
- b) The total cost of the first unit.
- c) The total cost of the first 8 units.

#### **Question 4:**

Green Energy Works expects an 80% learning curve in the assembly of a new solar device. The first unit takes 600 labour hours. Material cost per unit is Ugx 2,500. Labour rate is Ugx 4 per hour. Production overheads are 60% of labour cost.

Required: Calculate:

- i. Use the cumulative doubling method to determine the total time of producing the first to the 8th unit of this same product
- ii. The total cost of the first unit.
- iii. The total cost of the first 4 units