

## ARITHMETIC (Q 1, PAPER 1)

### LESSON NO. 5: FOREIGN EXCHANGE

**2000**

1 (b) 1 euro = IR£ 0.787564  
1 euro = DM 1.95583

(i) Calculate the value of IR£100 in euro, correct to two places of decimals.

(ii) Hence, calculate the value of IR£100 in Deutschmarks (DM), correct to two places of decimals.

**SOLUTION**

**1 (b) (i)**

$$\text{IR£}0.787564 = 1 \text{ euro}$$

$$\text{IR£}1 = \frac{1}{0.787564} \text{ euro}$$

$$\text{IR£}100 = \frac{1}{0.787564} \times 100 = 126.97 \text{ euro}$$

**1 (b) (ii)** You know that IR£100 amounts to 126.97 euro.

$$1 \text{ euro} = \text{DM } 1.95583$$

$$126.97 \text{ euro} = 1.95583 \times 126.97 = \text{DM } 248.33$$

**1998**

1 (c) A supplier agrees to buy 300 computer parts for 1060 Deutschmarks (DM) each. He plans to sell them for a total of IR£138,000.

(i) Calculate the percentage profit (on the cost price) he will make if the exchange rate is IR£1 = DM 2.65?

(ii) By how much will the percentage profit (on the cost price) change if the exchange rate becomes IR£1 = DM 2.50? Give your answer correct to one place of decimals.

**SOLUTION**

**1 (c) (i)**

$$\text{Cost price: } 300 \times 1060 \text{ DM} = 318,000 \text{ DM}$$

$$2.65 \text{ DM} = \text{£}1$$

$$1 \text{ DM} = \text{£} \frac{1}{2.65}$$

$$318,000 \text{ DM} = \text{£} \frac{1}{2.65} \times 318,000 = \text{£}120,000$$

Cost price: £120,000

Selling price: £138,000

$$\text{Profit} = \text{£}138,000 - \text{£}120,000 = \text{£}18,000$$

$$\% \text{ Profit} = \frac{\text{£}18,000}{\text{£}120,000} \times 100\% = 15\%$$

$$\text{Profit} = \text{Selling Price} - \text{Cost Price}$$

$$\text{Loss} = \text{Cost Price} - \text{Selling Price}$$

$$\% \text{ Profit} = \frac{\text{Profit}}{\text{Cost Price}} \times 100; \dots\dots \mathbf{1}$$

CONT...

**1 (c) (ii)**

Cost price:  $300 \times 1060 \text{ DM} = 318,000 \text{ DM}$

2.50 DM = £1

1 DM = £  $\frac{1}{2.50}$

318,000 DM = £  $\frac{1}{2.50} \times 318000 = £127,200$

Cost price: £127,200

Selling price: £138,000

Profit = £138,000 – £127,200 = £10,800

% Profit =  $\frac{£10,800}{£127,200} \times 100\% = 8.5\%$

Change in % profit =  $15\% - 8.5\% = 6.5\%$

Profit = Selling Price – Cost Price  
Loss = Cost Price – Selling Price

% Profit =  $\frac{\text{Profit}}{\text{Cost Price}} \times 100$ ; ..... **1**