



# **National Diploma Plant/Animal Farm Finance**

## **Handout 4B**

### **Drags (PTY) Ltd Model Answer Break-Even Analysis**

1.

FIXED COST		VARIABLE COST	
Advertising	20 000	Direct labour	744 000
Depreciation on plant and machinery	15 000	Direct material	435 000
Electricity – rent of meters	6 000	Electricity – units	24 000
Rent – Building	120 000	Railage	65 000
Wages of cleaners	24 000	Salaries – Factory foreman	109 000
Telephone – rent	6 000	Telephone – units	25 000
		Water – units	7 000
<b>Total</b>	<b>191 000</b>	<b>Total</b>	<b>1 409 000</b>
		<b>Variable cost/unit</b>	<b>R7.05</b>

## 2. Calculate the marginal income ratio (gross profit)

$$\begin{aligned}
 \text{Marginal Income ratio} &= \text{Marginal income} / \text{Income} \\
 &= (\text{Income} - \text{Variable cost}) / \text{Income} \\
 &= (10 \times 200\,000) - 1\,409\,000 / 2\,000\,000 \\
 &= 591\,000 / 2\,000\,000 \\
 &= 0,29 \text{ or } 29,55\%
 \end{aligned}$$

## 3. Calculate the break-even point in R and in units

$$\begin{aligned}
 \text{Break even in units} &= \text{Total fixed costs} / \text{marginal income per unit} \\
 &= 191\,000 / R2,95 \quad (R10 \times 29.55\% = R2.95) \\
 &= 64\,746 \text{ units}
 \end{aligned}$$

$$\begin{aligned}
 \text{Break even in rand} &= \text{Total fixed cost} / \text{marginal income} \\
 &= 191\,000 / 29,55\% \\
 &= R646\,362.10
 \end{aligned}$$