

## **Chapter 8**

### **E8.7 Sweet Inspiration**

(i)

|                                     | <b>Fixed<br/>costs<br/>£</b> | <b>Variable<br/>costs<br/>£</b> |
|-------------------------------------|------------------------------|---------------------------------|
| Promotion and marketing costs       | 5,000                        |                                 |
| Chocolate bar ingredients           |                              | 3,200                           |
| Operators' wages                    |                              | 10,300                          |
| Factory manager's salary            | 2,000                        |                                 |
| Chocolate bar packaging             |                              | 4,000                           |
| Administrative and accounting costs | 1,000                        |                                 |
|                                     | <hr/>                        | <hr/>                           |
| Total costs                         | <u>8,000</u>                 | <u>17,500</u>                   |

(ii)

You should refer to the relevant sections in Chapter 8 to check your outline of the approaches that may be taken to valuation of stocks of chocolate bars at the end of a month. Your solution may be supported by the following calculations.

#### **Marginal costing**

The variable costs in respect of the product incurred during a month total £17,500 and relate to 6,000 chocolate bars.

The variable cost per chocolate bar is therefore  $£17,500/6,000 = £2.92$

Chocolate bars may be costed on a variable (or marginal) costing basis.

The 200 chocolate bars in stock at the end of the month would be valued at  $200 \times £2.92 = £583$ .

#### **Absorption costing**

The total costs incurred during a month are £25,500 and relate to 6,000 chocolate bars.

The full cost per chocolate bar is therefore  $£25,500/6,000 = £4.25$

Chocolate bars may be costed on a full, or absorption, costing basis.

The 200 chocolate bars in stock at the end of the month would be valued at  $200 \times £4.25 = £850$ .

### E8.8 Little Sweep

(i)

| <b>Little Sweep Ltd</b>                      |                          |                            |                          |                     |                    |
|--|--------------------------|----------------------------|--------------------------|---------------------|--------------------|
| <b>Servicing machinery costs for 3 years</b> |                          |                            |                          |                     |                    |
| <b>Figures in £</b>                          | <b>Variable costs</b>    |                            | <b>Fixed costs</b>       |                     | <b>Total costs</b> |
|  | <b>Replacement parts</b> | <b>Other running costs</b> | <b>Maintenance costs</b> | <b>Depreciation</b> |                    |
| <b>Quarter</b>                               |                          |                            |                          |                     |                    |
| 1  | 600                      | 850                        | 350                      | 3,692               | 5,492              |
| 2  | 600                      | 850                        | 350                      | 3,385               | 5,185              |
| 3  | 600                      | 850                        | 350                      | 3,077               | 4,877              |
| 4  | 600                      | 850                        | 350                      | 2,769               | 4,569              |
| 5  | 600                      | 850                        | 350                      | 2,462               | 4,262              |
| 6  | 600                      | 850                        | 350                      | 2,154               | 3,954              |
| 7  | 600                      | 850                        | 350                      | 1,846               | 3,646              |
| 8  | 600                      | 850                        | 350                      | 1,538               | 3,338              |
| 9  | 600                      | 850                        | 350                      | 1,231               | 3,031              |
| 10   | 600                      | 850                        | 350                      | 923                 | 2,723              |
| 11   | 600                      | 850                        | 350                      | 615                 | 2,415              |
| 12   | 600                      | 850                        | 350                      | 308                 | 2,108              |
| Total  | 7,200                    | 10,200                     | 4,200                    | 24,000              | 45,600             |

#### **Working**

Depreciation

Machinery cost           £25,000

Estimated resale value    £1,000

Net cost                    £24,000 to be depreciated over 12 months

Sum of the digits: 1+2+3+4+5+6+7+8+9+10+11+12 = 78

Quarter 1: £24,000/78 x 12 = £3,692

Quarter 2: £24,000/78 x 11 = £3,385

Quarter 3: £24,000/78 x 10 = £3,077

and so on to

Quarter 12: £24,000/78 x 1 = £308

Total:                        £24,000

(ii)

**Marginal costing**

The variable costs for each year are as follows:

|        |  |
|--------|--|
| Year 1 | $4 \times (\pounds 600 + \pounds 850) = \pounds 5,800$ |
| Year 2 | $4 \times (\pounds 600 + \pounds 850) = \pounds 5,800$ |
| Year 3 | $4 \times (\pounds 600 + \pounds 850) = \pounds 5,800$ |
| Total  | $\pounds 17,400$                                       |

The average marginal costs for each customer are

$$\pounds 5,800/100 = \pounds 58 \text{ per year}$$

(iii)

**Absorption costing**

The total costs for each year are as follows:

|        |  |                    |
|--------|--|--------------------|
| Year 1 | $\pounds 3,692 + \pounds 3,385 + \pounds 3,077 + \pounds 2,769 + 4 \times (\pounds 600 + \pounds 850 + \pounds 350)$ | $= \pounds 20,123$ |
| Year 2 | $\pounds 2,462 + \pounds 2,154 + \pounds 1,846 + \pounds 1,538 + 4 \times (\pounds 600 + \pounds 850 + \pounds 350)$ | $= \pounds 15,200$ |
| Year 3 | $\pounds 1,231 + \pounds 923 + \pounds 615 + \pounds 308 + 4 \times (\pounds 600 + \pounds 850 + \pounds 350)$       | $= \pounds 10,277$ |
| Total  |  | $\pounds 45,600$   |

The average absorption costs for each customer are

$$\text{Year 1} \quad \pounds 20,123/100 = \pounds 201 \text{ per year}$$

$$\text{Year 2} \quad \pounds 15,200/100 = \pounds 152 \text{ per year}$$

$$\text{Year 3} \quad \pounds 10,277/100 = \pounds 103 \text{ per year}$$

(iv)

You should refer to the relevant sections in Chapter 8 to check your report on the relevance of the split of costs into fixed and variable, and the implications regarding the depreciation policy adopted by Little Sweep Ltd.