

**Task IM-9.45: Inventory valuation**

ROSSBACH Ltd. is a gas station. It sells petrol to private customers. During the Accounting period 20X4, ROSSBACH Ltd. buys petrol from its supplier every month. The price per litre is 1.10 EUR/l for the first 3 months and later 1.15 EUR. At the beginning of the Accounting period 20X4, there is an amount of petrol of 3,598 litres in the tank. The carrying amount of the opening stock is 1.08 EUR/l. As petrol is a liquid, ROSSBACH Ltd. applies the weighted average method for inventory valuation.

The purchase amounts are 10,000 litres every month, except of in May. The amount in May is 12,000 litres. The supply takes place every 1<sup>st</sup> of the month. The payment for the petrol is one month later. The customers pay all on cash.

The sales amounts are:

January: 9,401 litres

February: 10,980 litres

March: 7,219 litres

April: 9,344 litres

May: 13,120 litres

June: 8,923 litres.

The petrol selling prices are 1.29 EUR/l in January, February and March and 1.34 EUR/l in April, May, June.

**Required:** Calculate the closing stock of petrol. Calculate the gross profit for the 1<sup>st</sup> and 2<sup>nd</sup> quarter of 20X7. Calculate the petrol costs exact to 4 digits after the decimal point.

**Solution:**

|                         | litre    | Unit costs | CA          |
|-------------------------|----------|------------|-------------|
| Opening value           | 3,598    | 1.0800     | 3,885.84    |
| Purchase January        | 10,000   | 1.1000     | 11,000.00   |
| <i>Calculation-line</i> | 13,598   | 1.0947     | 14,885.84   |
| Sales January           | (9,401)  | 1.0947     | (10,291.35) |
| <i>Sum-line</i>         | 4,197    | 1.0947     | 4,594.49    |
| Purchase February       | 10,000   | 1.1000     | 11,000.00   |
| <i>Calculation-line</i> | 14,197   | 1.0984     | 15,594.49   |
| Sales February          | (10,980) | 1.0984     | (12,060.82) |
| <i>Sum-line</i>         | 3,217    | 1.0984     | 3,533.67    |
| Purchase March          | 10,000   | 1.1000     | 11,000.00   |
| <i>Calculation-line</i> | 13,217   | 1.0996     | 14,533.67   |
| Sales March             | (7,219)  | 1.0996     | (7,938.15)  |
| <i>Sum-line</i>         | 5,998    | 1.0996     | 6,595.52    |
| Purchase April          | 10,000   | 1.1500     | 11,500.00   |
| <i>Calculation-line</i> | 15,998   | 1.1311     | 18,095.52   |
| Sales April             | (9,344)  | 1.1311     | (10,569.10) |
| <i>Sum-line</i>         | 6,654    | 1.1311     | 7,526.41    |
| Purchase May            | 12,000   | 1.1500     | 13,800.00   |
| <i>Calculation-line</i> | 18,654   | 1.1433     | 21,326.41   |
| Sales May               | (13,120) | 1.1433     | (14,999.60) |
| <i>Sum-line</i>         | 5,534    | 1.1433     | 6,326.81    |
| Purchase June           | 10,000   | 1.1500     | 11,500.00   |
| <i>Calculation-line</i> | 15,534   | 1.1476     | 17,826.81   |
| Sales June              | (8,923)  | 1.1476     | (10,240.03) |
| <i>Sum-line</i>         | 6,611    | 1.1476     | 7,586.78    |

The gross profit in the first quarter equals to:  $(9,401 + 10,980 + 7,219) \times 1.29 - 10,291.35 - 12,060.82 - 7,938.15 = \mathbf{5,313.68 \text{ EUR}}$ . The gross profit in the second quarter equals to:  $(9,344 + 13,120 + 8,923) \times 1.34 - 10,569.10 - 14,999.60 - 10,240.03 = \mathbf{6,249.85 \text{ EUR}}$ .