

Subject n°32: Statistics

Please do not write on this document, and do not forget to hand it back at the end of the test.

A salesman sets his prices following this algorithm:

1. A **Reduction** (obtained from the supplier) decreases the **duty free price** by 12%
2. **Purchase fees** increase the previous price by 7%
3. **Managing and selling fees** increase the previous price by 35%
4. A **Profit** increases the previous price by 40%
5. **Taxes (VAT)** increase the previous price by 20%

The final result is the **selling price**.

- 1°) Determine the **selling price**, all taxes included, of an article whose initial duty-free price is £500.
- 2°) Determine the **multiplying coefficient k** that the salesman must apply to the initial duty free price to obtain the selling price, all taxes included.
- 3°) Calculate the initial duty free price for an object whose selling price, all taxes included, is £1,000.
- 4°) If we reduce £1,000 of 20%, then decrease it of 40%, then decrease it of 35%, then decrease it of 7%, then increase it of 12%, do we obtain the same result?

Note: duty-free price: Prix Hors-Taxes