

NICKS & TRICKS

LCOL Guide – Financial Maths – Part 1

1. Scientific Notation

Scientific Notation is a short way of writing either really large or really small number

a) Converting to Scientific Notation

Example: 3,124,000,000 \rightarrow 3.124×10^9

b)

Converting from Scientific Notation

Example: $6.745 \times 10^5 \rightarrow 674,500$

Move the decimal to the right the number of spaces indicated by the exponent

2. Some important definitions

- 1) Gross Income
- 2) Tax
- 3) Tax Credits
- 4) Interest
- 5) Balance

Worked Example

Question 1:

- a) A sum of €5,000 is invested in an eight-year government bond with an annual equivalent rate (AER) of 6%. Find the value of the investment when it matures in eight years' time.
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We know that the future value F of a present investment P invested for n years at a rate of $i\%$ is given by

$$F = P\left(1 + \frac{i}{100}\right)^n$$

Here, $P = €5,000$, $n = 8$ and $i = 6$.

This gives $F = 5000(1.06)^8$ which is €7, 989.24 correct to the nearest cent.

2 Questions – Time yourself!

Question 1

A different investment bond gives 20% interest after 8 years.

Calculate the AER for this bond.

Question 2

A salesman earns a basic salary of €150 per week. In addition, he gets commission of 20% on sales up to the value of €1000 in the week and 30% commission on any sales above this.

Find his total income for a week when his total sales amount to €3000.