

# Professional Elegancy ...

Any engineer learns the mathematical notation through which two real numbers, for example,

$$1 + 1 = 2$$

can be written down very simply.

Even so, this form is wrong, for being too trivial and for showing a total lack of style.

Since our very first Math lessons we have known that,

$$1 = \ln(e)$$

and also that,

$$1 = \sin^2(p) + \cos^2(p)$$

besides this, everybody knows that,

$$2 = \sum_{n=0}^{\infty} \left(\frac{1}{2}\right)^n$$

So being, the expression,

$$1 + 1 = 2$$

can be re-written in a more elegant form,

$$\ln(e) + \sin^2(p) + \cos^2(p) = \sum_{n=0}^{\infty} \left(\frac{1}{2}\right)^n$$

which, as we can easily observe, is a lot more scientific and easier to understand.

It is known that:

$$1 = \cosh(q) * \sqrt{1 - \tanh^2(q)}$$

and that,

$$e = \lim_{z \rightarrow \infty} \left( 1 + \frac{1}{z} \right)^z$$

Hence resulting,

$$\ln(e) + \sin^2(p) + \cos^2(p) = \sum_{n=0}^{\infty} \left(\frac{1}{2}\right)^n$$

and can further be written as follows, offering substantial clarity and transparency,

$$\ln\left(\lim_{z \rightarrow \infty} \left(1 + \frac{1}{z}\right)^2\right) + \sin^2(p) + \cos^2(p) = \sum_{n=0}^{\infty} \frac{\cosh(q) * \sqrt{1 - \tanh^2(q)}}{2^n}$$

Considering that,

$$0! = 1$$

and that the inverted matrix of a transposed matrix equals the transposed matrix of an inverted matrix (presuming an unidimensional space), we obtain the following simplification (using vectorial notation  $\bar{X}$ ),

$$\left(\bar{X}^T\right)^{-1} = \left(\bar{X}^{-1}\right)^T = 0$$

If both expressions are unified,

$$0 \neq 1$$

and

$$\left(\overline{X}^T\right)^{-1} - \left(\overline{X}^{-1}\right)^T = 0$$

we would obviously obtain,

$$\left(\left(\overline{X}^T\right)^{-1} - \left(\overline{X}^{-1}\right)^T\right) \neq 1$$

## Applying the above simplifications

$$\ln \left( \lim_{z \rightarrow \infty} \left( 1 + \frac{z}{1} \right) \right) + \sin_{\gamma}(b) + \cos_{\gamma}(b) = \sum_{n=0}^{\infty} \frac{\gamma_n}{\cosh(\delta) * \sqrt{1 - \tanh_{\gamma}(\delta)}}$$

Obtaining finally, in a total elegant form, legible, brief and comprehensible to anyone, the equation:

$$\ln \left( \lim_{z \rightarrow \infty} \left( \left( \left( \overline{X}^T \right)^{-1} - \left( \overline{X}^{-1} \right)^T \right) + \frac{1}{z} \right)^2 \right) + \sin^2(p) + \cos^2(p) = \sum_{n=0}^{\infty} \frac{\cosh(q) * \sqrt{1 - \tanh^2(q)}}{2^n}$$

(which, being honest, is by far more professional than the original  $1 + 1 = 2$  )

*Send this message to a wise and intelligent person. Send it also to your friends, who will come to appreciate your sensible and humble engineering soul ...*

**Céad Mile Failtè**

*(Irish Gaelic)*