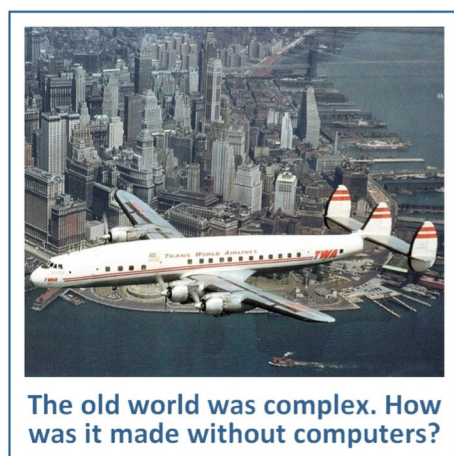
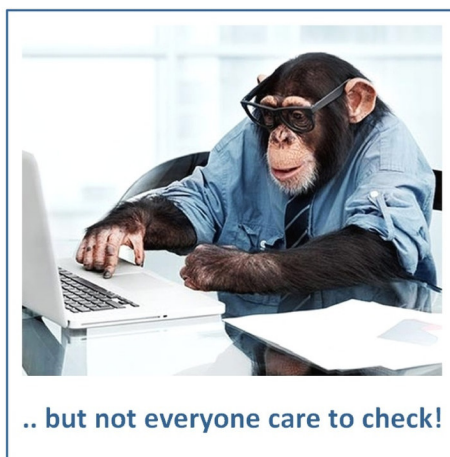
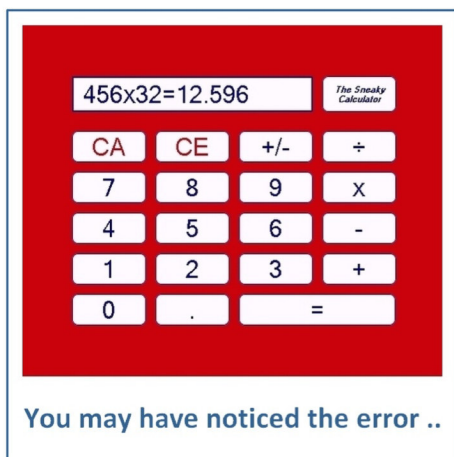


## Old Calculators & Democracy

*a new life for old instruments: ensuring the future by preserving the past*



I think it's useless to teach maths without explaining how calculations were performed before the digital era, it would be like to teach history starting only from 1970.

It takes just a few minutes to communicate the existence of a world before computers, a world where Man reached the Moon!

- ★ Nicola Marras
- 🏠 Calcolatoria: educational solutions, exhibits and conferences on the history of calculus
- ✂ History of calculating devices, private collector of slide rules and mechanical calculators

Contact Information  
[www.nicolamarras.it](http://www.nicolamarras.it)  
[mail@nicolamarras.it](mailto:mail@nicolamarras.it)

### The Lost Art of Numeracy

Nowadays calculations are delegated to electronic devices and the results uncritically read on the display, without any idea of how they are produced. People punch numbers into a calculator and expect it to provide the correct answer: the Art of Numeracy is no longer practiced and the world before computers almost forgotten. By now students approach maths being illiterate about its history, a false start.

### Step Back to Move Forward

The electronic aids should not blindly be trusted, with the old calculating devices the operators were always aware of their actions and used to check their work.

Today instead many people think "I don't need to check, the computer knows better than me". Sadly this is the base of the Authority Principle and of mental slavery.

Not by chance democracy was born in the same country in which maths

and geometry were born, but Scientific Thinking isn't a natural product of intelligence and must be cultivated steadily. A simple lesson about traditional calculation may help: a rational mind produces better decisions, better citizens and a better world.

With my e-book "Was There Life Before Computer?" and my educational material, *both freely downloadable* from my website, the teachers can easily illustrate this program in their classroom.