

## Mathematical Aspects from Life Science Illustrated by Gnuplot Software

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### SUMMARY

Due to the transformation of the students and the technique that we have is important to adapt our methods to teach mathematics. The most important aspect is the following: the principles in mathematical science are the same as always but the "clothes" are other. In order to use modern tools and techniques and to take advantages from the riches of information form the environment is mandatory to understand some basic principle from mathematical sciences and to develop our knowledge using dedicated mathematical software as Gnuplot free software that is wide word used in academic community.

The aim of this note is to show the advantages of this kind of software in order to uderstood and learn mathematics. We use this software because:

- makes numerical computations and it is easy to handle;
- has a very suggestive 2D and 3D graphic representation;
- can export information into many formats such as: .pdf, .eps, .txt, .ps, etc.
- software is based on command line, but commands are very suggestive and the syntax is easy to learn and can be easy adapted to any programming problem

For example, if we want to represent the function sin and cos on [-2, 4] we write the following command:

```
sin - Notepad
File Edit Format View Help
reset
plot [-2.25:4] sin(x) w lp,cos(x) w l
pause -1
```

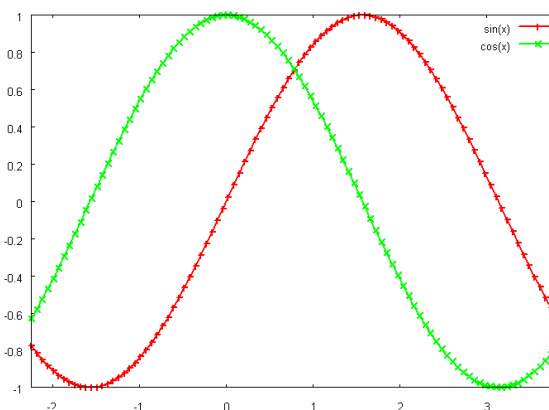


Fig. 1. Graphical representation of sin and cos functions using Gnuplot free software

**Keywords:** Gnuplot software, life science

### REFERENCES

1. <http://www.gnuplot.info/>.