

Quelques avantages de Sage

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SAGE is a distribution of **mathematics** software.

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Algebra	GAP, Maxima, Singular
Algebraic Geometry	Singular, Macaulay2
Arbitrary Precision Arithmetic	GMP, MPFR, MPFI, NTL, ...
Arithmetic Geometry	PARI, NTL, mwrank, ecm, ...
Calculus	Maxima, Sympy
Combinatorics	Symmetrca, MuPAD-Combinat*
Exact Linear Algebra	Linbox, IML
Graph Theory	NetworkX
Graphics	MatPlotLib, Tachyon3d
Group theory	GAP
Numerical Linear Algebra	GSL, Scipy, Numpy

The SAGE programming language is Python

It's *easy to read and write*.

- $\{17x \mid x \in \{0, 1, \dots, 9\} \text{ and } x \text{ is odd}\}$

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python: [17*x for x in range(0,10) if x%2 == 1]
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- fonction factorielle

```
def factorial(n):  
    if n==1:  
        return 1  
    else:  
        return n*factorial(n-1)
```

- Feb. 2005. SAGE-0.1, a Python library that glued together open source programs PARI, Maxima, Python, Singular, GAP.
- Feb. 2006. SAGE-1.0, Sage Days 1 workshop
- Aujourd'hui :
 - version 4.1
 - Sage days 17 (Barcelone, septembre 2009)