La plupart des exemples qui apparaissent ici sont tirés du tutorial de xcas

1 Premiers calculs

```
> 1/3+1/4
```
$\frac{7}{12}$
```
> sqrt(2)^5
```
$\sqrt{2}2^2$
```
> solve(a*x^2+b*x+c,x)
```
$[\frac{1}{2a}\cdot(-b+\sqrt{-4ac+b^2}), \frac{1}{2a}\cdot(-b-\left(\sqrt{-4ac+b^2}\right))]$
```
> 50!
```
30414093201713378043612608166064768844377641568960512000000000000
```
> 2*a+b
```
$2a+b$
```
> a/2*b
```
$\frac{a}{2}\cdot b$
```
> a/2/b
```
$\frac{a}{2b}$
```
> a^2*b
```
a^2b
```
> sqrt(2)
```
$\sqrt{2}$
```
> evalf(sqrt(2))
```
1.414214
```
> sqrt(2)-evalf(sqrt(2))
```
0.000000
```
> exact(evalf(sqrt(2)))*10^9
```
$\frac{57121500000000}{40391}$
```
> exact(evalf(sqrt(2)*10^9))
```
1414213562
```
> evalf(sqrt(2),50)
```
1.4142135623730950488016887242096980785696718753769 5
```
> evalf(pi,70)
```
3.1415926535897932384626433832795028841971693993751058209749445923078164
```
> Digits:=50
```
$[0,0,0,1,0,[0.000000,0.000000],50,[4,50,0,25],0,1,0]$
```
> evalf(pi)
```
3.1415926535897932384626433832795028841971693993751 0
```
> evalf(exp(pi*sqrt(163)))
```

$0.26253741264076874399999999999925007259719818568871 9e18$

```
> (1+2*i)^2
```

$-3+4*i$

```
> (1+2*i)/(1-2*i)
```

$\frac{-3+4*i}{5}$

```
> e^(i*pi/3)
```

$\text{inv}(2)+\frac{(i)\sqrt{3}}{2}$

```
> 1/0; (1/0)^2 -(1/0)^2
```

infinity,undef

2 Manipulation des chaînes de caractères

```
> s:="azertyuiop"
```

azertyuiop

```
> size(s)
```

10

```
> s[0]+s[3]+s[size(s)-1]
```

arp

```
> concat(s[0],concat(s[3],s[size(s)-1]))
```

arp

```
>  head(s); tail(s)
```

"a","zertyuiop"

```
> mid(s,3,2)
```

rt

```
> l:=asc(s)
```

$[97, 122, 101, 114, 116, 121, 117, 105, 111, 112]$

```
> ss:=char(l)
```

azertyuiop

```
> string(123)
```

123

```
> expr(123)
```

$\text{expr}(123)$

```
> expr(0123)
```

$\text{expr}(83)$

3 Les variables

```
> a==b
```

0

```
> a:=b
```
$$b$$
```
> a==b
```
$$1$$
```
> solve(a=b,a)
```
$$[]$$
```
> solve(2*a=b+1,a)
```
$$[\mathrm{inv}\,(1)]$$
```
> sqrt(a^2)
```
$$\mathrm{abs}\,(b)$$
```
> assume(a<0)
```
$$a$$
```
> sqrt(a^2)
```
$$-a$$
```
> assume(n,integer)
```
$$DOM_INT$$
```
> sin(n*pi)
```
$$0$$
```
> subst(a^2+1,a=1)
```
$$2$$
```
> subst(a^2+1,a=sqrt(b-1))
```
$$b$$
```
> a^2+1
```
$$a^2+1$$