

```

> with(Groebner);
[Basis, FGLM, HilbertDimension, HilbertPolynomial, HilbertSeries, Homogenize, InitialForm,
InterReduce, IsBasis, IsProper, IsZeroDimensional, LeadingCoefficient, LeadingMonomial,
LeadingTerm, MatrixOrder, MaximalIndependentSet, MonomialOrder, MultiplicationMatrix,
MultivariateCyclicVector, NormalForm, NormalSet, RationalUnivariateRepresentation, Reduce,
RememberBasis, SPolynomial, Solve, SuggestVariableOrder, Support, TestOrder, ToricIdealBasis,
TrailingTerm, UnivariatePolynomial, Walk, WeightedDegree]

> f1,f2 := x*y+1, y+1;
                                f1,f2 := x y + 1, y + 1

> f := x*y^2-x;
                                f := x y2 - x

> f1,f2 := x*y+1, y+1;
                                f1,f2 := x y + 1, y + 1

Divide f by [f1,f2] using lexicographical ordering with x>y
> NormalForm( f, [f1,f2], plex(x,y) );
                                1 - x

> NormalForm( f, [f2,f1], plex(x,y) );
                                0

> NormalForm( f, [f1,f2], plex(x,y), 'a' );
                                1 - x

> a;
                                [y, -1]

> G := Basis( [f1,f2], plex(x,y) );
                                G := [y + 1, x - 1]

> NormalForm( f, G, plex(x,y) );
                                0

> NormalForm( f, [G[2],G[1]], plex(x,y) );
                                0

```