

Pensieve header: Computations in diagonalizable ϵ -solvable PBW algebras.

Structures:

Algebra[potgens_List, nilgens_List, pbwrules_List]

potgens: The potent generators.

nilgens: The nilpotent generators.

The PBW ordering is always potgens~Join~nilgens.

pbwrules: A list of rules of the form $w[g_1, g_2] \rightarrow (\text{sum of } w\text{'s})$.

```
Algebra[gln,ε] := {
  Table[xi,i, {i, n}],
  Flatten@{
    Table[yi,j, {j, 2, n}, {i, 1, j - 1}],
    Table[xi,j, {j, 2, n}, {i, 1, j - 1}]
  }
}

In[*]:= Algebra[gl3,ε]

Out[*]=
{{x1,1, x2,2, x3,3}, {y1,2, y1,3, y2,3, x1,2, x1,3, x2,3}}
```