

```

$EPBWGens := Flatten@{
  Table[As[i, 1, $n - 1], As[j, i + 1, $n],
    x[i, j]* =  $\xi$ [i, j];  $\xi$ [i, j]* = x[i, j]; x[i, j]],
  Table[As[i, 1, $n - 1],
    A[i]* =  $\mathcal{A}$ [i];  $\mathcal{A}$ [i]* = A[i]; A[i][_]],
  Table[As[i, 1, $n - 1],
    a[i]* =  $\alpha$ [i];  $\alpha$ [i]* = a[i]; a[i]]
}

(#U = U0@#) & /@ $EPBWGens;

$EPBWRule := Module[{k = 0}, Flatten@Table[{g → ++k, gi_ → {i, k}}, {g, $EPBWGens}]];
x_ ≤ y_ := OrderedQ[{x, y} /. $EPBWRule]; x_ < y_ := ! OrderedQ[{y, x} /. $EPBWRule];
$PBWGens := DeleteCases[$EPBWGens, _[_]]

```