

Pensieve header: The linearized KV equations.

```

SetDirectory["C:/drorbn/AcademicPensieve/Projects/WKO4"];
<< FreeLie.m;
{A = LS[{x, y}, As], B = LS[{x, y}, Bs]};
msgs = SeriesSolve[{A, B},
   $\hbar^{-1} (b[LW@x, A] + b[LW@y, B] \equiv LS[0]) \wedge (\text{div}_x[A] + \text{div}_y[B] \equiv CWS[0])$ ];
A@16; Length[Last[#]] & /@ Read[msgs]

FreeLie` implements / extends
{*, +, **, $SeriesShowDegree, <>, ∫, ≡, ad, Ad, adSeries, AllCyclicWords, AllLyndonWords,
  AllWords, Arbitrator, ASeries, AW, b, BCH, BooleanSequence, BracketForm, BS, CC, Crop,
  CW, CWS, CWSeries, D, Deg, DegreeScale, DerivationSeries, div, DK, DKS, EulerE, Exp,
  Inverse, j, J, JA, LieDerivation, LieMorphism, LieSeries, LS, LW, LyndonFactorization,
  Morphism, New, RandomCWSeries, Randomizer, RandomLieSeries, RC, SeriesSolve,
  Support, t, tb, TopBracketForm, tr, UndeterminedCoefficients, Γ, ℓ, Λ, σ, ħ, ⌊, ⌋}.

FreeLie` is in the public domain. Dror Bar-Natan
  is committed to support it within reason until July 15, 2022.

SeriesSolve::ArbitrarilySetting: In degree 1 arbitrarily setting {As[y] → 0}.
SeriesSolve::ArbitrarilySetting: In degree 8 arbitrarily setting {As[x, x, x, x, y, x, y] → 0}.
SeriesSolve::ArbitrarilySetting: In degree 10 arbitrarily setting {As[x, x, x, x, x, x, y, x, y] → 0}.
General::stop: Further output of SeriesSolve::ArbitrarilySetting will be suppressed during this calculation. >>
{1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 1, 1, 2, 2, 3, 3, 5}

{TimeUsed[], MaxMemoryUsed[]}
{25721.7, 20586669072}

```