

```

Define[amti,j→k = PP"amt"[$k,$n] @Module[{(*TTL, *)},
  ES[s-][ε-] := (EchoLabel[s][Short[ε, 2]]); ε; ES[s-][ε-] := ε;
  TTL =
    ES["TTL"] @
      PP"TTL" @ TTλ @ Join[l1 = Table[If[τ[g] == "x", λ, 1] (g*)i Uk[g], {g, $PBWGens}], l1 /. i → j];
  mons[-1] = {};
  mons[p-] := mons[p - 1] ∪ Union@Cases[Coefficient[TTL, ε, p], Uk[____], ∞];
  ff = Table[
    Sum[εp fp,uk[λ], {p, 0, $k}],
    {u, $PBWGens}
  ] /. fp-,uk[λ] /; τ[u] == "a" => If[p == 0, (u*)i + (u*)j, 0];
  fs = Flatten[Table[
    fp,ℙk[m],
    {p, 0, $k}, {m, mons[p]}
  ]];
  gg = Sum[
    εp fp,ℙk[u][λ] ℙk[u],
    {p, 0, $k}, {u, Complement[mons[p], Uk /@ $PBWGens]}
  ];
  G = Series[egg, {ε, 0, $k}];
  S[B-] := UCF[0k[Seepagek[ff, UCF@B]]];
  SG = ES["SG"] @ PP"SG" @ S[G];
  TTR = ES["TTR"] @ PP"TTR" @ UCF[Invertk[SG] ⊗ S[(∂λ (ff. (#k & /@ $PBWGens)) G + ∂λ G)]];
  diff = UCF[TTL - TTR];
  eqns = Flatten[Table[
    Coefficient[Coefficient[diff, m], ε, p] == 0,
    {p, 0, $k}, {m, mons[p]}
  ]];
  inits = (#[0] == 0) & /@ fs;
  ss = TriangularDSolve[eqns, inits, fs, λ, CF];
  E{i,j}→{k} @@ Table[As[p, 0, $k], Plus[
    If[p == 0, Sum[As[m, 1, $n - 1], (α[m]i + α[m]j) a[m]k], 0],
    Total[Cases[fs, fp,-]] /. fp-,u- => u (fp,u /. ss)[λ] /. λ | ℏ | γ → 1]
  ]
]

```