

```

ValidColouring[k_List, e_List, s_List, g_List] :=
  ValidColouring[k, e, s, g] = Block[{v, n = Length@k}, v = Array[0 &, 2 n];
  v[[e]] = g;
  And @@ Table[PermutationConjugation[v[[c[[1]]],
    SortBy[k, Length[c ∩ #] &][[-1]] // If[#[[3]] = Mod[#[[5]] + 1, 2 n, 1], v[[c[[2]]],
      InversePermutation@v[[c[[2]]]] &] // If[v[[c[[3]]] === 0, v[[c[[3]]] = #;
    True, (*Check if derived value matches previously assigned value.*)
    v[[c[[3]]] = #] &, {c, s}]]];

```