

```
ThinPosition[K_] := Module[{todo, done, pd, c},
  todo = List @@ PD@K; done = {}; pd = PD[];
  While[todo != {},
    AppendTo[pd,
      c = RandomChoice@MaximalBy[todo,
        Length[done ∩ List @@ #] &]];
    todo = DeleteCases[todo, c];
    done = done ∪ List @@ c];
  pd];

ThinPosition[K_, n_] :=
  First@MinimalBy[Table[ThinPosition[K], n],
  Width];
```