```
RVK[pd_PD] := PP_RVK@Module[{n, xs, x, rots, front = {0}, k},
    n = Length@pd; rots = Table[0, {2 n}];
    xs = Cases[pd, x_X :> {Xp[x[[4]], x[[1]]]  PositiveQ@x
                           Xm[x[[2]], x[[1]]]      True   ];
    For[k = 0, k < 2 n, ++k, If[k == 0 ∨ FreeQ[front, -k],
      front = Flatten[front /. k → (xs /. {
              Xp[k + 1, l_] | Xm[l_, k + 1] :> {l, k + 1, 1 - l},
              Xp[l_, k + 1] | Xm[k + 1, l_] :> (++rots[[l]];
                {1 - l, k + 1, l})
            })],
      Cases[front, k | -k] /. {k, -k} :> --rots[[k + 1]];
     ]];
    RVK[xs, rots]];
RVK[K_] := RVK[PD[K]];
```