

```
RVK[pd_PD] :=
```

```
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@Replace[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}),
```

```
_Xp | _Xm := {}
```

```
}), {1}],
```

```
Cases[front, k | -k] /.
```

```
{k, -k} := --rots[[k + 1];
```

```
]]];
```

```
RVK[xs, rots] ];
```

```
RVK[K_] := RVK[PD[K]];
```