

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

```
PPRVK@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]] ;
```