PassMapping[*v*, *l*, *p*, *c*, *n*, *a*, *i*] gives the values that *a* should be mapped to after a 2–pass has been made at index *i*, from indices *v* with all indices *l*, passing over the list of strands *c*, in an *n*–crossing knot with a list of pairs *p*.

```
PassMapping[v_List, l_List, p_List,
   c_List, n_Integer, a_Integer, i_Integer] :=
  PassMapping[v, l, p, c, n, a, i] = If[Length[v ⋂ l[[;; 2]]] == 1,
    Mod[If[MemberQ[v ⋃ Join @@ c, a],
       If[MemberQ[c[[1]], a], a + If[Mod[Abs@p[[l[[1]]] - i, 2 n] > 1, 1, -1],
        If[MemberQ[c[[2]], a],
         a + If[Mod[Abs@p[[l[[3]]] - i, 2 n] > 1, 1, -1],
         (l[[{2, 1, 4, 3}]] + {-1, 1, -1, 1})
          [[Position[l, If[OddQ[l[[1]] + l[[2]]], Total@v - a, a]][[1, 1]]]]],
       a], 2 n, 1],
     If[MemberQ[v ⋃ Join @@ c, a] || EvenQ@a,
      If[Mod[a - i, 2 n] ≤ 1 || OddQ@a && ¬ MemberQ[l, a], -Sign@p[[a]], 1],
      Sign@p[[a]]],
    Mod[
     If[MemberQ[v, a], SortBy[Delete[l, FirstPosition[l, #] & /@ v],
        Mod[#, 2] &][[Mod[a, 2] + 1]],
      a + If[MemberQ[Join @@ c, a], 0,
        If[MemberQ[v, l[[Ordering[Mod[a - l, 2 n, 1]][[1]]]], -1, 1]]],
     2 n, 1]
    If[OddQ@a, Sign@p[[a]] If[MemberQ[v ⋃ Join @@ c, a], 1, -1], 1]];
```