KnotSort@*l* sorts the knots of the list *l* where alternating knots always come first and all further order is determined lexicographically where non–alternating knots are first compared by absolute value, and then further canonically.

```
KnotSort@l_List :=
  KnotSort@l = Sort[l, If[Length@#1 == Length@#2,
      If[#1 === Abs /@ #1,
       #2 =!= Abs /@ #2 || Order[#1, #2] == 1,
       #2 =!= Abs /@ #2 && If[Abs /@ #1 === Abs /@ #2,
         Order[#1, #2] == 1,
         Order[Abs /@ #1, Abs /@ #2] == 1]],
      Length@#1 < Length@#2] &];
```