```
KnotGraph@k_MD := KnotGraph@k = (Join @@ Table[
        Array[{v, # - 1} ⟷ {v, Mod[#, 4]} &, 4] ⋃
          {{v, 0} ⟷
            {Ordering[List @@ Abs /@ k][[v]], 1},
          {v, 2} ⟷ {Ordering[List @@ Abs /@ k][[
              Mod[v - 1, Length@k, 1]]], 3}},
        {v, Length@k}] // Graph);
```