

Format [Knot [n_, k_]] := n_k;

Table [K → V₂[K], {K, AllKnots@{3, 7}}]

{3₁ → 1, 4₁ → -1, 5₁ → 3, 5₂ → 2, 6₁ → -2, 6₂ → -1, 6₃ → 1,
7₁ → 6, 7₂ → 3, 7₃ → 5, 7₄ → 4, 7₅ → 4, 7₆ → 1, 7₇ → -1}