Structural or analytic derivation

This is a polynomial in the delay operator $Sx[n] = x[n-1]$: $T = \sum \alpha_k S^k$. Its operator norm on bounded sequences equals $\sum |\alpha_k|$, by the finite phase-alignment proof of the convolution norm. The representation exactly separates delay from coefficient arithmetic.

Comparative cost and preferred method

Four coefficient reads and a four-term expression are sufficient and necessary for arbitrary coefficients. Direct and structural derivations coincide. No transform sampling is required.