Concept Question 10-14: What attribute of Daubechies wavelet functions makes them sparsify piecewise polynomial functions?

The Daubechies wavelet function is given by $h[n] = \{1, -1\} * \{1, -1\} * \cdots * \{1, -1\} * q[n]$ (see Eq. (10.135)). Each difference reduces the degree of a polynomial by one, as derived in Section 10-12.