Nodos igualmente espaciados

Diferencias hacia adelante

$$\Delta^0 y_k \quad := \quad y_k,$$

$$\Delta^1 y_k \quad = \quad y_{k+1} - y_k,$$

$$\Delta^2 y_k \quad = \quad y_{k+2} - y_{k+1} - y_{k+1} + y_k \quad = \quad y_{k+2} - 2y_{k+1} + y_k,$$

$$\ldots$$

$$\Delta^n y_k \quad = \quad \sum_{j=0}^{n} (-1)^j \binom{n}{j} y_{k+n-j}$$