In order to interpolate the values of y for given values of x at the ending of the tabulated data, Newton's backward interpolation formula is used.

Suppose the $(n+1)$ equidistant values are (x_i, y_i) i = 0, 1, 2,..., n.

Let $(x - x_n) = uh$, where $0 \le u \le n$. Then

$$y_x = y_n + u\Delta_1 y_n + \frac{u(u+1)}{2!}\Delta_2 y_n + \frac{u(u+1)(u+2)}{3!}\Delta_3 y_n + \frac{u(u+1)(u+2)(u+3)}{4!}\Delta_4 y_n + \cdots$$

$$+\frac{u(u+1)(u+2)\cdots(u+n-1)}{n!}\Delta_n y_n$$

$$y_x = y_n + \sum_{r=1}^{n}\binom{u+r-1}{r}\Delta_r y_{n;}$$

where $\Delta_r y_n$ is the end value of rth difference of y.