

Newton's Backward difference interpolation

Algorithm

1. Start
2. Declare $x[20], y[20], f, s, d, h, p$ as float data type and i, j, k, n as integer
3. Read the record n and read elements of x and y using for loop
4. Calculate $h = x[2] - x[1]$
5. Read the point which is going to be searched
6. Calculate $s = (f - x[n]/h), d = y[n], p = 1$
7. Using for loop Calculate f and d
 - (a) $y[j] = y[j] - y[j-1]$
 - (b) $p = p * (s * k - 1) * k$
 - (c) $d = d + p * y[n]$
8. print f and d
9. Stop.