

## Newton's forward difference

## Algorithm

step 1 start

step 2. Declare  $x[20], y[20], f, s, h, d, p$  as float data type &  $i, n$  as integer data typestep 3 Read the records  $n$  and read the elements of  $x$  and  $y$  using for loopstep 4 Calculate  $h = x[2] - x[1]$ 

step 5 Read the point which is going to be searched

step 6 Calculate  $s = (f - x[i]) / h$   
 $p = 1$   
 $d = y[1]$ step 7 Using for loop calculate  $p$  and  $d$ 

$$(a) y[i] = y[i+1] - y[i]$$

$$(b) p = p * (s - i + 1) / i$$

$$(c) d = d + p * y[i]$$

step 8 print  $f$  and  $d$ 

step 9 stop