

Algorithm: Euler's modified Method

- Read $x_0, y_0, x_n, h, \text{error} = 0.0001$
 - Set $x = x_0$
 - Set $y = y_0$
 - Set $i = 1$
 - Print i, x, y
 - While ($x \leq x_n$)
 - Set $y_1 = y + h * f(x, y)$do
 - Set $y_0 = y_1$
 - $y_1 = y + \left(\frac{h}{2}\right)[f(x, y) + f(x + h, y_1)]$While ($|y_1 - y_0| > \text{error}$) do
 - Set $y = y_1$
 - Set $x = x + h$
 - Set $i = i + 1$
 - Print i, x, yEnd while
- END