

Worksheet for the Improved Euler Method

IVP : $\frac{dy}{dx} =$

$y(\quad) =$

Step size : $h =$

x_0					
y_0					
h					
k_1					
$x_0 + h$					
$y_0 + k_1$					
k_2					
Δy					

$$k_1 = h \cdot f(x_0, y_0)$$

$$k_2 = h \cdot f(x_0 + h, y_0 + k_1)$$

$$\Delta y = \frac{1}{2} (k_1 + k_2)$$

$$\text{new } x_0 = x_0 + h$$

$$\text{new } y_0 = y_0 + \Delta y$$

Repeat