

Usar Euler $\frac{dy}{dx} = 1 + x \operatorname{Sen}(xy)$ $y(0) = 0$ de 0 a 1

para $h = 1$

$$y(1) = y(0) + f(x, y)(1)$$

$$y_{i+1} = y_i + f(x, y) h$$

$$f(x, y) = 1 + 0 \cdot \operatorname{Sen} xy = 1$$

$$y(1) = 0 + 1 = 1$$

Para $h = 0.5$

$$y(0.5) = y(0) + f(x, y)(0.5)$$

$$f(x, y) = 1(0.5) = 0.5$$

$$y(0.5) = 0 + 0.5 = 0.5$$

$$y(1) = y(0.5) + f(x, y)(0.5)$$

$$y(1) = 1.06185$$

Para $h = 0.25$

$$y(0.25) = y(0) + f(x, y)(0.25)$$

$$y(0.25) = 0 + 0.25 = 0.25$$

$$y(0.5) = y(0.25) + f(0.25, 0.25)(0.25)$$

$$y(0.5) = 0.503904$$

$$y(0.75) = y(0.5) + f(0.5, 0.503904)(0.25)$$

$$y(0.75) = 0.785066$$

$$y(1) = y(0.75) + f(0.75, 0.785066)(0.25)$$

$$y(1) = 1.1392$$