

$$y_{n+1} = y_n + hf(x_n, y_n)$$

$$x_{n+1} = x_n + h$$

$$\begin{cases} 2y - 2 = xy' \Rightarrow y' = \frac{2y-2}{x} \\ y(1) = 3 \end{cases}$$

$$(x_0, y_0) = (1, 3)$$

$$h = 0.5$$

$$n = 2$$

$$y_1 = y_0 + 0.5f(x_0, y_0)$$

$$y_1 = 3 + 0.5 \left(\frac{2 \cdot 3 - 2}{1} \right) = 5$$

$$x_1 = 1 + 0.5 = 1.5$$

$$y_2 = 5 + 0.5 \left(\frac{2 \cdot 5 - 2}{1.5} \right)$$

$$y_2 = y(2) = \frac{11.5}{1.5} = \frac{23}{3}$$