




$$k_1 = \Delta t f(t_n, \phi_n)$$


$$k_2 = \Delta t f\left(t_n + \frac{\Delta t}{2}\right)$$


$$k_3 = \Delta t f\left(t_n + \frac{\Delta t}{2}, \phi_n + \frac{k_2}{2}\right)$$


$$k_4 = \Delta t f(t_n + \Delta t, \phi_n + k_3)$$


$$\phi_{n+1} = \phi_n + \frac{1}{6}(k_1 + 2k_2 + 2k_3 + k_4)$$