

# Rechenvorlage für das Runge Kutta Verfahren

## Gegebene Werte:

Schrittweite  $h$  : \_\_\_\_\_ gegebene DGL:  $y' := f(x;y) =$  \_\_\_\_\_ gegebene Startwerte:  $x_0 =$  \_\_\_\_\_  $y_0 =$  \_\_\_\_\_

n	x	y	k	$x * k_n$
	$x_0 =$	$y_0 =$	$k_0 = f(x_0; y_0) =$	$k_0 =$
	$x_0 + \frac{h}{2} =$	$y_0 + (\frac{h}{2} * k_0) =$	$k_1 = f\left(x_0 + \frac{h}{2}; y_0 + \frac{h}{2} * k_0\right) =$	$2 * k_1 =$
	$x_0 + \frac{h}{2} =$	$y_0 + (\frac{h}{2} * k_1) =$	$k_2 = f\left(x_0 + \frac{h}{2}; y_0 + \frac{h}{2} * k_1\right) =$	$2 * k_2 =$
	$x_0 + h =$	$y_0 + (h * k_2) =$	$k_3 = f(x_0 + h; y_0 + h * k_2) =$	$k_3 =$
	$x_1 =$	$y(\text{---}) = y_0 + h * k =$	$k = \frac{1}{6} * \sum x * k_n =$	
n	$x_1 =$	$y(\text{---}) =$	k	$x * k_n$
	$x_0 =$	$y_0 =$	$k_0 = f(x_0; y_0) =$	$k_0 =$
	$x_0 + \frac{h}{2} =$	$y_0 + (\frac{h}{2} * k_0) =$	$k_1 = f\left(x_0 + \frac{h}{2}; y_0 + \frac{h}{2} * k_0\right) =$	$2 * k_1 =$
	$x_0 + \frac{h}{2} =$	$y_0 + (\frac{h}{2} * k_1) =$	$k_2 = f\left(x_0 + \frac{h}{2}; y_0 + \frac{h}{2} * k_1\right) =$	$2 * k_2 =$
	$x_0 + h =$	$y_0 + (h * k_2) =$	$k_3 = f(x_0 + h; y_0 + h * k_2) =$	$k_3 =$
	$x_1 =$	$y(\text{---}) = y_0 + h * k =$	$k = \frac{1}{6} * \sum x * k_n =$	