$\frac{dy}{dx} = f(x, y(x), z(x)), \qquad y(x_0) = y_0$

$\frac{dz}{dx} = g(x, y(x), z(x)), \qquad z(x_0) = z_0$

$k_1 = hf(x_n, y_n, z_n)$

$l_1 = hg(x_n, y_n, z_n)$

$k_2 = hf(x_n + h/2, y_n + k_1/2, z_n + l_1/2)$

$l_2 = hg(x_n + h/2, y_n + k_1/2, z_n + l_1/2)$

$k_3 = hf(x_n + h/2, y_n + k_2/2, z_n + l_2/2)$

$l_3 = hg(x_n + h/2, y_n + k_2/2, z_n + l_2/2)$

$k_4 = hf(x_n + h, y_n + k_3, z_n + l_3)$

$l_4 = hg(x_n + h, y_n + k_3, z_n + l_3)$

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

$l = \frac{1}{6}(l_1 + 2l_2 + 2l_3 + l_4)$

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

$y_{n+1} = y_n + k$

$z_{n+1} = z_n + l$