function [t,y] = odeRK4(f,y0,t0,tf,h)

t = t0:h:tf;

n = length(t);

y = zeros(1,n);

y(1) = y0; % valor inicial de y

for i=1:n-1

ti = t(i);

yi = y(i);

h2 = h/2;

k1 = f(ti,yi);

k2 = f(ti+h2,yi+k1\*h2);

k3 = f(ti+h2,yi+k2\*h2);

k4 = f(ti+h,yi+k3\*h);

phi = (1/6)\*(k1+2\*k2+2\*k3+k4);

y(i+1) = yi + phi\*h;

end

end