```
clc; clear all;
f = @(t,Y) [2*Y(1); -3*Y(2)];

x = linspace(-10,10,20);
y = linspace(-10,10,20);
[x1,y1] = meshgrid(x,y);

u = zeros(size(x1));
v = zeros(size(y1));
t=0; % we want the derivatives at each point at t=0, i.e. the starting time
for i = 1:numel(x1)
    Xprime = f(t,[x1(i); y1(i)]);
    u(i) = Xprime(1);
    v(i) = Xprime(2);
end
quiver(x1,y1,u,v,'r'); figure(gcf)
xlabel('x')
ylabel('y')
axis tight equal;
grid on;
```