

Euler's Method

$$y_{n+1} = y_n + h \cdot f(x_n, y_n)$$

```
function [x, y] = euler_method(x0, xn, y0, h, f)
x = x0:h:xn;
y(1) = y0;

for n = 1:length(x)-1
    y(n+1) = y(n) + h * f(x(n), y(n));
end

plot(x, y, '*-');
legend('f(x)');
title('Euler's Method');

end
```