Problem:

Solve the following initial value problem using MATLAB's *ode45*

$$\frac{dy}{dx} = yx^3 - 1.1y$$

where $y(0) = 1$.

Requirements:

1. Generate a graph of y vs x for x = 0 to 2.

2. Use a vector for **x** (this is what you use for **tspan**) when calling **ode45** where the increment in **x** is 0.05. **ode45** should return a vector of x and y values where the increment in **x** is 0.05 when you do this correctly (see the description of tspan with more than two entries on slide 7 of Lecture 26).

Solution to the differential equation dy/dx = yx³ - 1.1y