

$$y' = 4x^3 - 6x + 2, \quad y(1) = 0$$

Integrate:

$$y = \int (4x^3 - 6x + 2) dx = x^4 - 3x^2 + 2x + C$$

Apply initial condition:

$$y(1) = 1^4 - 3(1)^2 + 2(1) + C = 0$$

$$C = 0$$

So, $y = x^4 - 3x^2 + 2x$