0.1 Name: Neptun:

1. Compute the derivative of the following function:

$$\ln(3x) + \frac{5}{(3x^5)} - \frac{1}{\sqrt[4]{(3x)}}$$

2. Compute the indefinite integral of the following function:

$$\cos(3x - 1)$$

3. Find the general solutions of the following differential equation:

$$y'(x) = 2 - 3x^2$$

4. Find the particular solution of the following differential equation:

$$y'(x) = 3 - 2x, \quad y(2) = 1.$$