

CSE-5368 Neural Networks

Fall 2022 Quiz 03

Time: 12 Minutes

Consider the following performance surface:

$$F(\mathbf{X}) = x_1^3 + 3x_1x_2 - 5x_1 + 8$$

Calculate the **FIRST** and **SECOND** directional derivative of this function at point **(2,1)** in the direction of **(3,4)**