

MATH 251 – QUIZ 5

Question 1: (5 points)

Find the equation of the tangent plane to the following surface at the point $(2, 2, -1)$:

$$(x + y + z)^2 = x^2 + y^2 + z^2$$

Question 2: (5 points)

Find the **points** at which the following function attains a local maximum, minimum, or saddle

$$f(x, y) = x^4 - 2x^2 + y^3 - 3y$$

Note: You do not have to calculate the values of f at the points