

Math 2513 – Summer 2024

Quiz 1

Name:

Student ID:

1 – What is the definition of a line? (1)

2 – What are 2 of the 3 possible equations that describe a plane? (2)

3 – Given the line $f(x,y) = 3x - 2y$, does the point $(0, 4, 5)$ sit on it? What about the point $(1, 2, -1)$? (2)

4 – We know that the point $(2, -4, 5)$ sits on the plane that has the normal vector $[2, 2, 2]$. What are the three possible equations for describing the plane? (3)

5 – How far away is the point $(3, -4, 2)$ from the plane described by the equation $(x+2) + (y-3) + z = 12$? (2)

6 – Sketch the level curves for the surface $2x^2 - 3y + 2y^2 - z = 1$. (4)