

4.(Incompleto)

5) Hallar la ecuación del plano
tangente a $z^2 - x^2 - y^2 + 4x = 6$
, que sea perpendicular a la recta:
L: $x = 3 + 4t$, $y = -2t$, $z = 1 + 2t$

$$L: (x, y, z) = (3, 0, 1) + t(4, -2, 2)$$

$$\text{Vector director} = (4, -2, 2)$$

Vector Paralelo a el plano tangente

$$= (x_0, y_0, z_0) = (a, b, c)$$

$$(a, b, c) \cdot (4, -2, 2) = 0$$

$$4a + (-2b) + 2c = 0$$

$$2a - b + c = 0$$