

Name: _____ ID #: _____ Section #: 5

Question 1 Consider the line $L: x = 4 + t, y = -t, z = 1 - t$ and the plane $P: x - 2y + 3z = 4$.

- Find an equation of the plane that contains the line L and is parallel to the plane P .
- Find a point at which the line L intersects the plane P .

Question 2 Consider the quadric surface $x^2 - y^2 - 2z^2 + 4y + 4z - 6 = 0$.

- Identify and sketch the surface.
- Find and identify the traces of the surface on the planes $x = 1$ and $z = 0$.