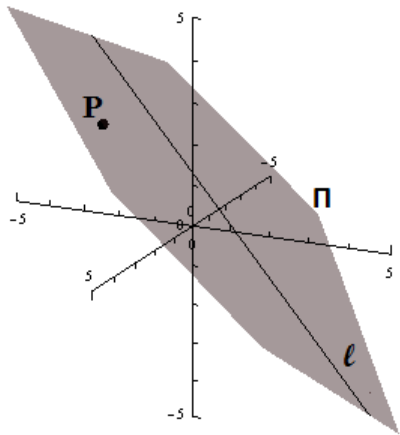


YOUR NAME: _____

George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Consider the point $P(-1, -3, 2)$ and the line ℓ determined by the parametric equations $x = 1 + t, y = 1 - t, z = 1 + 2t$. These are shown in the figure for your benefit.



- (a) Find two points on the line ℓ .

- (b) Find two vectors lying on the plane Π that contains the point P and the line ℓ .

- (c) Find an equation for the plane Π .