**LINEAR ALGEBRA I ASSIGNMENT 2**

1. (i) Reduce the matrix  to echelon form.
2. Use the echelon form matrix in part a)(i) above to solve the following system of linear equations.
3. Find the perpendicular distance from point to the plane .
4. Find the area of the triangle determined by the points , and .
5. Find the angle between the planes and .
6. Express the polynomial 1+3x+4x^2 as a linear combination of the polynomials

1+2x+3x^2, -1+x+x^2and 2+x+x^2.

1. Define a linear function f:R^3⟶R^3 by f(x, y, z)=(x-z, y-x, z-y) . Find
2. the kernel of f .
3. the nullity f.
4. the rank of f and a basis for the range of f.