Name:	**ID:**

MATH-260 Term-082 QUIZ-5

1) Suppose that A is an $n \times n$ matrix and that k is a (constant) scalar. Show that the set of all vectors x such that $Ax = kx$ is subspace of R^n.

2) Find a basis for the solution space of the given homogeneous linear system.

$$x_1 - 2x_2 + 3x_3 = 0$$
$$2x_1 - 3x_2 - x_3 = 0$$

3) Find the general solution. $4y''+4y'+y=0$

4) Use the Wronskian to prove that th given functions are linearly independent.

$$f(x)=x,\ g(x)=xe^{x},\ h(x)=x^{2}e^{x}$$