NAME: AJAKAYE JADESOLA

MATRIC NUMBER : 18/SCI01/010

COURSE CODE : MAT 204

ASSIGNMENT 2

1.
2. **LINEAR TRANSFORMATION**:

 It is also called linear mapping ,it is a mapping V W between two modules (for example, two vector spaces) that preserves ( in the sense defined below) the operations of addition and scalar multiplication.

1. **RANK OF A MATRIX**:

In linear algebra, the rank of a matrix A is the dimension of the vector space generated (or spanned ) by its columns. This corresponds to the maximal number of linear independent columns of A . This , in turn, is identical to the dimension of the vector space spanned by its rows. The rank is commonly denoted by rank(A) or rk(A); sometimes the parenthesis are not written, as in rank A

1. MATRIX X

.

 1 2 8

 4 7 6

 9 5 3

X = 1 7 6 -2 4 6 + 8 4 7

 5 3 9 3 9 5

 X = 1( 21 – 30 ) - 2 ( 12 – 54 ) + 8 ( 20 – 63 )

 X = -9 +84 -344

 = -269

 X ≠ 0

THE MATRIX X IS A NON-SINGULAR MATRIX.

1.

 DOMAIN X CODOMAIN Y

 E. .2

 F. .4

 G. .6

 H. .8

 I. .10

 J.

 K.

 X T Y