

ABSTRACT

REPRESENTATION OF LINEAR OPERATOR IN FINITE SEQUENCE SPACE l_3

by

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The mapping of vector space especially on norm space is called operator. There are many cases in linear operator from sequence space into sequence space can be represented by an infinite matrices. For example, a matrices $A : l_3 \rightarrow l_3$ where $A = \begin{bmatrix} a_{11} & a_{12} & \dots \\ a_{21} & a_{22} & \dots \\ \vdots & \vdots & \vdots \end{bmatrix}$ and $l_3 = \{x = (x_i) \mid (\sum_{i=1}^{\infty} |x_i|^3)^{\frac{1}{3}} < \infty\}$ is a sequence real numbers. Furthermore, it can be constructed an operator A from sequence space l_3 to sequence space l_3 by using a standard basis (e_k) and it can be proven that the collection all the operators become Banach space.

Key Words : Operator, finite sequence space

ABSTRAK

REPRESENTASI OPERATOR LINIER PADA RUANG BARISAN l_3

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Suatu pemetaan pada ruang vektor khususnya ruang bernorma disebut operator. Banyak kasus pada operator linear dari ruang barisan ke ruang barisan dapat diwakili oleh suatu matriks tak hingga. Sebagai contoh, suatu matriks $A : l_3 \rightarrow l_3$ dengan $A = \begin{bmatrix} a_{11} & a_{12} & \dots \\ a_{21} & a_{22} & \dots \\ \vdots & \vdots & \vdots \end{bmatrix}$ dan $l_3 = \{x = (x_i) \mid (\sum_{i=1}^{\infty} |x_i|^3)^{\frac{1}{3}} < \infty\}$ merupakan barisan bilangan real. Selanjutnya, dikonstruksikan operator A dari ruang barisan l_3 ke ruang barisan l_3 dengan basis standar (e_k) dan ditunjukkan bahwa koleksi semua operator membentuk ruang Banach.

Kata Kunci : *Operator, Ruang Barisan Terbatas.*