MAT 211: Linear Algebra

Problem Set 4

Stony Brook University Spring 2019
Dzmitry Dudko

Problem 1. (4 points) Determine if the vector v is a linear combination of the remaining vectors.

$$v = \begin{bmatrix} 1 \\ 7 \end{bmatrix}, \qquad u_1 = \begin{bmatrix} 1 \\ -1 \end{bmatrix}, \qquad u_2 = \begin{bmatrix} 5 \\ -1 \end{bmatrix}.$$

Problem 2. (5 points) Determine if the vector v is a linear combination of the remaining vectors.

$$v = \begin{bmatrix} 9 \\ 7 \\ 2 \end{bmatrix}, \qquad u_1 = \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix}, \qquad u_2 = \begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}.$$

Due Date: Thursday March 7.