

Attendance Quiz for Lecture 5

NAME: (print!) _____ Section: _____

E-MAIL ADDRESS: (print!) _____

1. Determine the value of r for which

$$\mathbf{v} = \begin{bmatrix} 1 \\ r \\ 2 \end{bmatrix} .$$

is in the span of

$$\mathcal{S} = \left\{ \begin{bmatrix} 1 \\ 2 \\ -1 \end{bmatrix} , \begin{bmatrix} -1 \\ -2 \\ 2 \end{bmatrix} \right\} .$$

2. Find a subset of the following set \mathcal{S} of vectors in R^3 with the same span as \mathcal{S} that is as small as possible.

$$\mathcal{S} = \left\{ \begin{bmatrix} 1 \\ -1 \\ 2 \end{bmatrix} , \begin{bmatrix} 2 \\ -3 \\ 0 \end{bmatrix} , \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix} \right\} .$$