NAME: (print!) _____   **Section:** _____

E-MAIL ADDRESS: (print!) _____

1. Determine whether the given set is linearly independent

$$\left\{ \begin{bmatrix} 1 \\ -1 \\ 0 \end{bmatrix} , \begin{bmatrix} -1 \\ 0 \\ 2 \end{bmatrix} , \begin{bmatrix} 2 \\ 1 \\ 1 \end{bmatrix} \right\} \quad .$$

2. Determine, if possible, a value of r for which the given set is linearly dependent.

$$\left\{ \begin{bmatrix} -2 \\ 0 \\ 1 \end{bmatrix} , \begin{bmatrix} 1 \\ 0 \\ -3 \end{bmatrix} , \begin{bmatrix} -1 \\ 1 \\ r \end{bmatrix} \right\} \quad .$$