

Name (Last, First): _____

Student ID: _____

1. Determine if the columns of the matrix form a linearly independent set.

$$\begin{bmatrix} 0 & 2 & 3 \\ 1 & 3 & 6 \\ -1 & 1 & 0 \end{bmatrix}$$

2. Let $T(x, y) = (2x + y, x)$. Show that T is a **one-to-one** linear transformation. Does T map \mathbb{R}^2 **onto** \mathbb{R}^2 ?