Name: _____

Math 2250, Fall 2011, Quiz 5 **October 7, 2011** **R. Bruner**

Suppose that $T\begin{bmatrix} 3 \\ 2 \end{bmatrix} = \begin{bmatrix} 5 \\ 2 \end{bmatrix}$ and $T\begin{bmatrix} 4 \\ 3 \end{bmatrix} = \begin{bmatrix} 2 \\ 1 \end{bmatrix}$.

1. Express $\begin{bmatrix} 1 \\ 0 \end{bmatrix}$ as a linear combination of $\begin{bmatrix} 3 \\ 2 \end{bmatrix}$ and $\begin{bmatrix} 4 \\ 3 \end{bmatrix}$.

2. Use that to compute $T\begin{bmatrix} 1 \\ 0 \end{bmatrix}$.

3. Write the matrix form of T.
