

3. Let

$$M = k \xrightarrow{\begin{bmatrix} 1 \\ 0 \end{bmatrix}} k^2 \xleftarrow{\begin{bmatrix} 0 \\ 1 \end{bmatrix}} k$$
$$M' = k \xrightarrow{\begin{bmatrix} 1 \\ 0 \end{bmatrix}} k^2 \xleftarrow{\begin{bmatrix} 1 \\ 0 \end{bmatrix}} k$$

- (a) Show that M, M' are not indecomposable.
 - (b) Show that M, M' are not isomorphic.
4. Find all indecomposable representations (up to isomorphism) of the quiver $Q = 1 \rightarrow 2$. [Hint: Use Theorem LA1]