

## Exercises on Morita equivalences

(1) Work out the equivalence  $K\text{-mod} \simeq \text{Mat}(n \times n, K)\text{-mod}$  ( $n \geq 2$ ), using the functors in the proof of Theorem 9.9.

(2) Let  $A = \begin{pmatrix} K & K \\ 0 & K \end{pmatrix}$  and  $B = \begin{pmatrix} K & K & K \\ K & K & K \\ 0 & 0 & K \end{pmatrix}$ . Check that  $A$  has three indecomposable modules, up to isomorphism.

Work out equivalences  $A\text{-mod} \xrightarrow{\sim} B\text{-mod}$  and  $B\text{-mod} \xrightarrow{\sim} A\text{-mod}$ .