

Exercises on almost split sequences (2)

We continue "Exercises on almost split sequences (1)."

(a') Extend the result of (a) by showing that the indecomposable injective A -modules are uniserial, too.

Prove that all indecomposable A -modules are uniserial.

Prove that A has finite representation type.

Prove (b) by using that indecomposables are uniserial.

(b') Use (b) to prove that all indecomposable A -modules are uniserial.

(c) Determine the Auslander Reiten quiver of the algebra

$$A = \left\{ \begin{pmatrix} a & b & c \\ 0 & d & e \\ 0 & 0 & a \end{pmatrix} : a, b, c, d, e \in K \right\} \text{ (a subalgebra of the upper triangular matrices)}$$

(f) Determine the Auslander Reiten quivers of some algebras $A = KQ/I$, where $Q = \tilde{A}_3$.