

SF2735 Homologisk Algebra
Exercise set 3

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The solutions to these exercises are to be handed in no later than Thursday, 4th of November. Please pay attention to the presentation as well as the arguments given in the solutions. Why not write the solutions using a modern type writer?

Exercise 1

Compute $\text{Tor}_{\mathbf{Z}/(8)}^n(\mathbf{Z}/(4), \mathbf{Z}/(4))$.

Exercise 2

Let $0 \rightarrow N_1 \rightarrow N \rightarrow N_2 \rightarrow 0$ be a short exact sequence of A -modules. Show that if N and N_2 are flat, then N_1 is flat. If N_1 and N are flat, can you show that N_2 is flat?