

Homework 9

Deadline: Tuesday, December 16 at 14:00.

Please submit your solutions either on paper at the beginning of the practicals or as a pdf-file in <https://owl.mff.cuni.cz/> . Everything that is not immediately obvious needs to be proved or quoted from lecture notes.

1. Construct a splitting field \mathbb{F}_8 of the polynomial $x^7 + 1$ over the field \mathbb{Z}_2 and decompose it into linear factors in $\mathbb{F}_8[x]$.