Algebra 2 (2013)-Aalborg University
Lecture 3, February 12th

3rd Lecture (B): Tuesday February 9th, 8:15-12:00 at room G5-112.

- 8:15-10:00 Repetition from last lecture (pages 116–119). Lecture: Ring homomorphisms. The unique ring homomorphism from $\mathbb{Z}$. Binomial formula in prime characteristic (119–123).

- 10:00-12:00 Work in groups: exercises + proofs.

  Proofs: Theorem 3.1.11, Proposition 3.2.2, Proposition 3.2.6, Proposition 3.2.7.

  Exercises from [Lau], 3.6 (page 138): 11, A, 19, 13, 18, 15, 23 + some exercises from the previous lectures that you did not solved yet.

  Exercise A: Check that
  $$\begin{array}{rcl} \varphi : \mathbb{Z}/6\mathbb{Z} & \to & \mathbb{Z}/6\mathbb{Z} \\ [x] & \mapsto & [3][x] \end{array}$$

  is not a ring homomorphism because (only) one of the necessary conditions is not satisfied.

Best regards,

Diego