

# Weekly Excercise 5

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The objectives of this worksheet are:

- Implement things

## **Problem 1.**

Find all Solutions to the equation  $x^2 \oplus x = [0]$  in  $\mathbb{Z}_4$

*Proof.*

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## **Problem 2.**

- (1) Prove: If  $[a] \in \mathbb{Z}_n$  is a unit, then  $[a]$  is not a zero divisor.
- (2) Prove: If  $[b] \in \mathbb{Z}_n$  is a zero divisor, then  $[b]$  is not a unit.

*Proof.*

□