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Course: MATH 636 - Algebraic Topology III

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Homework 3

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Term: Spring 2025

Due Date: ^{24th} April, 2025

Problem 1

Compute both $\text{Tor}_i(A, B)$ and $\text{Ext}^i(A, B)$ for all i in the following cases:

(a) $A = \mathbb{Z}/9$ and $B = \mathbb{Z}/6$.

(b) $A = \mathbb{Z}/9$ and $B = \mathbb{Z}$.

(c) $A = \mathbb{Z}^2 \oplus \mathbb{Z}/4 \oplus \mathbb{Z}/5 \oplus \mathbb{Z}/10$ and $B = \mathbb{Z} \oplus \mathbb{Z}/3 \oplus \mathbb{Z}/4 \oplus \mathbb{Z}/6$.

Solution:
