

Tag. HW2.

Title. Homework (2).

Abstract. Recently, in September 2025, Roland van der Veen and myself released a paper titled "A Fast, Strong, Topologically Meaningful, and Fun Knot Invariant" (arXiv:2509.18456). More recently, in January 2025 in Les Diablerets (see <https://drorbn.net/ld26>), I gave a talk in which I suggested 27 homework tasks related to that same invariant θ (plus a bonus task).

Today, after a brief review, I'll talk a bit more about just 4 of those tasks:

- * Figure out the relationship of θ with Chern Simons theory.
- * Complete the discussion of the relationship of θ with sl_3 .
- * Find formulas for θ corresponding to other presentations of the Alexander module.
- * Fully understand θ -like formulas and their non-uniqueness (i.e., clean the mess).