Algebraic Invariants in Knot Theory
Practicals 14

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Exercise 1 (7.2.3). Find and prove a formula that determines the total linking number of the torus link $K(q, r)$.

Exercise 2.

   (i) Determine the Jones polynomial of the knot $K(2, 3)$.

   (ii) Determine the Jones polynomial of the knot $K(q, 2)$ for variable $q > 0$ such that $2 \nmid q$.

   (iii) Determine the Jones polynomial of the knot $K(q, 3)$ for variable $q > 0$ such that $3 \nmid q$.

   (iv) * Find and prove a formula for the Jones polynomial of the torus knot $K(q, r)$ with $\gcd(q, r) = 1$.