Algebraic Invariants in Knot Theory
Practicals 2

Filippo Spaggiari

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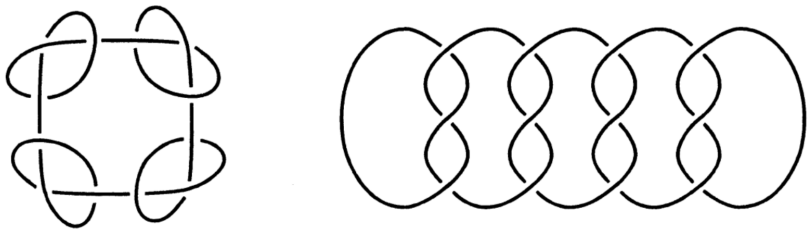
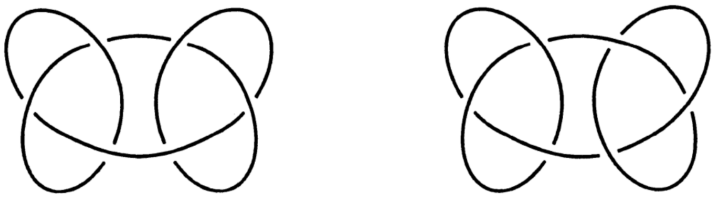
Exercise 1 (1.5.1 rev). Are the following knots equivalent?



Exercise 2 (1.5.2 rev). Are the following knots equivalent?



Exercise 3 (4.2.1). Show that for $\mathsf{c}(D) = 0, 1, 2$, the trivial knot is the only knot that possesses a regular diagram D with one of the above values.

Exercise 4 (4.2.2). Show that the trifoil knot (either left-hand or right-hand), K, has $\mathsf{c}(K) = 3$. Further, show that among all knots and links the trifoil knot is the only one with $\mathsf{c}(K) = 3$.

Exercise 5 (4.3.2). Show that if $\mathsf{br}(K) = 1$ then K is the trivial knot, and that the trivial knot is the only knot with bridge number equal to 1.

Exercise 6 (4.4.3). Show that the following knot has unknotting number of at most three.