Introduction to Knot Theory

Chapter 7. Numerical Invariants

7.5. Independence of Numerical Invariants-Proofs of Theorems





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Proof. Given a labeling of K with all the transpositions of S_n , we know that the set of labels generates all of S_n . The labels on the bridges (that is, the arcs with local maxima) determine all other labels, as was claimed in Chapter 5. By Exercise 5.1.8, S_n cannot be generated by fewer than n-1 transpositions. So the number of bridges must be at least n, as claimed.

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