

A relation between sharp move and Delta move

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Abstract. In this talk, we study certain local moves for knots. First we observe a relation between the sharp move and the Delta move. We show that the sharp-unknotted number of a knot is less than three times the Delta-unknotted number of the knot. Second we consider a property of the sharp-Gordian graph. The sharp-Gordian graph $\mathcal{G}_\#$ is a bipartite graph because a single sharp move changes the arf invariant. We show that, for any knot and any natural numbers m, n , there exists a complete bipartite graph $K_{m,n} \subset \mathcal{G}_\#$ such that $K_{m,n}$ contains the knot.