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**Kyungpyo Hong\*** ([kphong@nims.re.kr](mailto:kphong@nims.re.kr)), 70 Yuseong-daero 1689-gil, Yuseoung-gu, Daejeon, 34047, South Korea. *Results of some kinds of stick numbers of knots.*

The stick number  $s(K)$  of a knot or a link  $K$  is defined to be the minimum number of sticks required to construct a polygonal representation of the knot or link. In particular, the lattice stick number  $s_L(K)$  of a knot or a link  $K$  is defined to be the minimum number of sticks in the cubic lattice  $\mathbb{Z}^3 = (\mathbb{R} \times \mathbb{Z} \times \mathbb{Z}) \cup (\mathbb{Z} \times \mathbb{R} \times \mathbb{Z}) \cup (\mathbb{Z} \times \mathbb{Z} \times \mathbb{R})$ . The minimum lattice length  $Len(K)$  of a knot or a link  $K$  is defined to be the minimum number of edges which are line segments of unit length joining two nearby lattice points in  $\mathbb{Z}^3$ . In this time, I will introduce our results related to above three invariants of knot. I provide upper bounds of them in terms of its crossing number  $c(K)$ . And I find the exact values of them for small knots or links. (Received August 17, 2015)