Let $K$ be a topological knot or link. An $\alpha$—regular conformation of $K$ is a polygonal embedding of $K$ in three-space such that each edge (stick) has unit length and adjacent sticks meet at an angle of $\alpha$. The $\alpha$—regular stick number of $K$, $S_{1,\alpha}(K)$, is the minimal number sticks needed to form an $\alpha$—regular conformation of $K$ in space. We describe a recipe for constructing $\alpha$—regular conformations of any $K$ and any $\alpha \in (0, \pi)$, which relies on the construction of a particular Seifert surface for $K$. This recipe provides upper bounds for $S_{1,\alpha}(K)$ that are generically not sharp. We also describe a technique for obtaining sharper upper bounds for knots of low crossing number that posses certain symmetries. (Received August 01, 2005)