The stick number of any knot K, denoted by s(K), is the smallest number of edges of a polygon equivalent to K. How many knots can we make with 3 sticks?

Stick number

Note: 2 consecutive sticks connot cross in a projection. (The projection of each stick lies on a line. Two different lines interpect at most once. These two lines share a common part the projection of these two lines share a common part the projection of

(Note: The only knot with a projection with 2 or fewer crossings is the unknot).

How many knots can we make with 4 sticks?

sticks 1,2,3,4 possible crossings DR 1,3 DA in a projection 275 2,4 So, a projection of a Knor with 4 sticks can have at most 2 crossings So, it is the unknor

Stick number

So the prove - D they connot interat

In fact, a knot with 4 sticks can have at most 1 crossing. (Ut pound that the possible crossings in a diagram were: (1,3), and (2,4) stick 2=4h $v_2 \in$ stick I is formed by vertices vo, vi shek 2 is formed by bibs shok4= V3V0 The line in which the projection of sticks lies in divides the 52 plane in 2 parts ?, and P. 11 / 49

We can make the trefoil knot with 6 sticks.



