

A Variant on the Feline Josephus Problem

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In the Feline Josephus problem, soldiers stand in a circle, each having ℓ lives. Going around the circle, a life is taken from every k th soldier; soldiers with 0 lives remaining are removed from the circle. Finding the last surviving soldier proves to be an interesting and difficult problem, even in the case when $\ell = 1$. In our variant of the Feline Josephus problem, we instead remove a life from k consecutive soldiers, and skip 1. In certain cases, we find closed formulas for the surviving soldier, and hint at a way of finding such solutions in other cases. Also, we present an interesting open problem for this variant.

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