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Extremal problems involving vertices and edges on odd cycles. (In English)

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Let G be a graph on n vertices and with $\lfloor n^2/4 \rfloor + 1$ or more edges. The authors investigate the minimum of the number of vertices and edges of G which are on triangles and, more generally, cycles of length $2k + 1$. They also conjecture that if $k \geq 2$ then at least $2n^2/9 - O(n)$ edges of G are on cycles of length $2k + 1$.

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Classification:

05C35 Extremal problems (graph theory)

05C38 Paths and cycles

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