

Abreu, M.; Araujo-Pardo, G.; Balbuena, C.; Labbate, D.

A construction of small $(q - 1)$ -regular graphs of girth 8. (English) Zbl 1310.05152

Electron. J. Comb. 22, No. 2, Research Paper P2.10, 8 p. (2015).

Summary: In this note we construct a new infinite family of $(q - 1)$ -regular graphs of girth 8 and order $2q(q - 1)^2$ for all prime powers $q \geq 16$, which are the smallest known so far whenever $q - 1$ is not a prime power or a prime power plus one itself.

MSC:

05C69 Vertex subsets with special properties (dominating sets, independent sets, cliques, etc.)

Cited in **2** Documents

05C35 Extremal problems in graph theory

Keywords:

cages; girth; Moore graphs; perfect dominating sets

Software:

GENREG

Full Text: [Link](#) [arXiv](#)