

planetmath.org

Math for the people, by the people.

girth

Canonical name Girth

Date of creation 2013-03-22 12:45:56 Last modified on 2013-03-22 12:45:56

Owner ariels (338) Last modified by ariels (338)

Numerical id 4

Author ariels (338)
Entry type Definition
Classification msc 05C38

 ${\bf Related\ topic} \qquad {\bf Chromatic Number And Girth}$

The girth of a graph G is the length of the shortest cycle in G.¹ For instance, the girth of any grid \mathbb{Z}^d (where d > 2) is 4, and the girth of the vertex graph of the dodecahedron is 5.

¹There is no widespread agreement on the girth of a forest, which has no cycles. It is also extremely unimportant.