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Digraphs from powers modulo p . (English) Zbl 0855.05067
Fibonacci Q. 34, No. 3, 226-239 (1996).

Let G_p^k denote the digraph whose vertices are the nonzero residues modulo the prime p in which there is an edge directed from vertex a to vertex b if and only if $a^k \equiv b \pmod{p}$; each component of such a graph consists of a collection of rooted trees whose roots lie on a cycle. The authors describe a number of graph-theoretical features of G_p^k that can be determined in terms of number-theoretical properties of p and k .

Reviewer: [J.W.Moon \(Edmonton\)](#)

MSC:

05C20 Directed graphs (digraphs), tournaments
11B50 Sequences (mod m)
05C38 Paths and cycles

Cited in **16** Documents

Keywords:

digraph; rooted trees; cycle