

**Betin, Cansu; Kuzucuoglu, Mahmut**

**On locally graded barely transitive groups.** (English) Zbl 1279.20001  
Cent. Eur. J. Math. 11, No. 7, 1188-1196 (2013).

Let  $G$  be a transitive permutation group on an infinite set. Then  $G$  is said to be barely transitive if every orbit of every proper subgroup of  $G$  is finite. The second author has considered such  $G$  several times over last 20 years or more.

Here the authors' main theorem is the following. If  $G$  is barely transitive, then  $G$  is totally imprimitive if and only if  $G$  is locally graded. ( $G$  is totally imprimitive if there is an ascending chain of proper blocks of  $G$  with no maximal member;  $G$  is locally graded if every nontrivial finitely generated subgroup of  $G$  has a proper subgroup of finite index.)

In particular every locally finite, barely transitive group is totally imprimitive. The authors continue by producing fairly detailed descriptions of certain types of barely transitive groups.

Reviewer: **B. A. F. Wehrfritz (London)**

**MSC:**

**20B07** General theory for infinite permutation groups  
**20F50** Periodic groups; locally finite groups  
**20E25** Local properties of groups

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**Keywords:**

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