

Non-discrete frieze groups

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Abstract. The classification of Euclidean frieze groups into seven conjugacy classes is well known, and many articles on recreational mathematics contain frieze patterns that illustrate these classes. However, it is only possible to draw these patterns because the subgroup of translations that leave the pattern invariant is (by definition) cyclic, and hence discrete. In this paper we classify the conjugacy classes of frieze groups that contain a non-discrete subgroup of translations, and clearly these groups cannot be represented pictorially in any practical way. In addition, this discussion sheds light on why there are only seven conjugacy classes in the classical case.