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**Pseudofinite fields and random graphs**

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A **pseudofinite field** is an infinite field satisfying all first-order properties which hold in **all** finite fields. Pseudofinite fields exist and they can be realized, for example, as ultraproducts of finite fields.

An  **$n$ -ary random graph** is a set  $X$  with a symmetric and irreflexive  $n$ -ary relation  $R$  such that for any two finite and disjoint subsets  $A$  and  $B$  of  $X^{n-1}$ , there is an  $x \in X$  such that  $R(a, x)$  and  $\neg R(b, x)$  for all  $a \in A$  and  $b \in B$ .

In 1980 J. L. Duret interpreted a random binary graph in a pseudofinite field. This has some important model theoretic consequences.

We will show that we can interpret a random  $n$ -ary graph in pseudofinite fields.