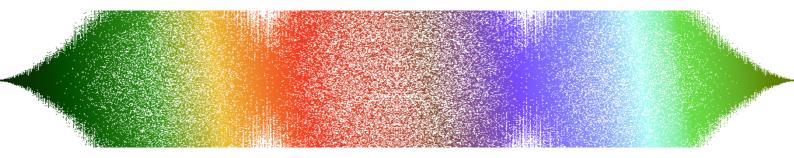
Charlas abiertas IEMath-GR & Coloquio "José Mendoza Ríos"



The multiplicative order

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Given two positive coprime integers \mathbf{a} and \mathbf{n} , there exists a smallest positive integer \mathbf{k} such that \mathbf{n} divides $\mathbf{a}^{\mathbf{k}}$ -1. The integer \mathbf{k} is called the multiplicative order of \mathbf{a} modulo \mathbf{n} . It shows up in many unexpected places in mathematics and leads to several unsolved problems, e.g. the famous Artin primitive root conjecture (1927). My talk is an introduction to the history and mathematics related to the multiplicative order.







