

Real Modular Arithmetic

Why

We extend modular arithmetic to the real numbers.

Definition

Two real numbers $x,y\in {\bf R}$ are congruent modulo $\alpha\in {\bf R}$ if their difference is a multiple of α

Notation

For $x, y \in \mathbf{R}$, if x and y are congruent modulo $\alpha \in \mathbf{R}$ we write

$$x \equiv y \pmod{\alpha}$$

