



Why

We extend modular arithmetic to the real numbers.

Definition

Two real numbers $x, y \in \mathbf{R}$ are congruent modulo $\alpha \in \mathbf{R}$ 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

$$x \equiv y(\mod \alpha)$$

