

Definition

We say that a is **congruent to b modulo n** , or

$$a \equiv b \pmod{n},$$

if a and b have the same remainder upon division by n .

- 1 We say that $14 \equiv 5 \pmod{3}$, since $14 = 4 * 3 + 2$ and $5 = 1 * 3 + 2$.
- 2 We have $8 \not\equiv 1 \pmod{5}$, since $8 = 1 * 5 + 3$ and $1 = 0 * 5 + 1$.
- 3 All the numbers on the list

$$2, 5, 8, 11, 14, 17, 20, 23, 26, \dots$$

are congruent to 2 modulo 3.