

## Definition

We say that  $a$  **divides**  $b$ , or  $a|b$ , if  $b = ka$  for some  $k \in \mathbb{Z}$ .

## Definition

We say that  $a \equiv b \pmod{n}$ , if  $a$  and  $b$  have the same remainder when dividing by  $n$ .

## Theorem

$$a \equiv b \pmod{n} \iff n|(b - a)$$