

**Definition: Greatest common divisor** Let  $a$  and  $b$  be integers, not both zero. The largest integer  $d$  such that  $d$  is a factor of  $a$  and  $d$  is a factor of  $b$  is called the greatest common divisor of  $a$  and  $b$  and is denoted by  $\gcd(a, b)$ .