

Definition

- Let $m, n \in \mathbb{Z}$ and not both zero. Then the **greatest common divisor** of m, n , denote $\gcd(m, n)$, is the largest positive number that divides both of them.
- If $\gcd(m, n) = 1$ we say that m and n are **relatively prime**.

Example

Let $m = 42$ and $n = 63$.

- **Divisors of 42:** 1,2,3,6,7,14,21,42
- **Divisors of 63:** 1,3,7,9,21,63

Then $\gcd(42, 63) = 21$.