

Integer types

Cairo uses the following integer types: Type Minimum Maximum u8 0 $2^8 - 1$ u16 0 $2^{16} - 1$ u32 0 $2^{32} - 1$ u64 0 $2^{64} - 1$ u128 0 $2^{128} - 1$ u256 0 $2^{256} - 1$ The `usize` type is an alias for `u32`, and is used for array indexing.

Integer Creation

All integer types except `u256` can be created as literals using the appropriate suffix. The `u256` type is only supported by construction from other types. `fn main() { let x: u8 = 10_u8; let y = 0xff_u64; // let z = 10_u256; // Error: u256 literals are not supported let z: u256 = u256 { high: 0_u128, low: 10_u128 } // 10 in u256 type }`

Integer Operations

Currently, all integer types but `u256` support the operations in the following table. Operation Description Supported by `u256` + Addition Yes - Subtraction Yes * Multiplication Yes / Integer division Yes % Modulo No == Equality Yes != Inequality Yes < Less than Yes <= Less than or equal Yes

Greater than Yes = Greater than or equal Yes | Bitwise or Yes & Bitwise and Yes ^ Bitwise xor Yes

[9.1.2 Felt252 type](#) § [9.1.4 String types](#) §