The following opcodes are used for **Modulus**:

- MODI — Mod by Signed Integer
- MODU — Mod by Unsigned Integer

??? abstract "MODI — *Mod by Signed Integer*"

```
=== "Properties"

    | Property        | Value                      |
    |-----------------|----------------------------|
    | **Opcode**      | 17                         |
    | **Type**        | Arithmetic                 |
    | **Operand Type**| Signed 64-bit integer      |
    | **Destination** | `L2` (implicit)            |

=== "Algorithm"

    ```
    L2 = L2 % <signed_imm>
    L2 = L2 % <reg_val>
    L2 = L2 % <const>
    ```

=== "Example"

    ```
    ; imm +ve
        MODI    1
    ; imm -ve
        MODI    -123
    ; reg val
        MODI    val(QT)
    ; const
        MODI    SOME_CONST_VAL
    ```
```

??? abstract "MODU — *Mod by Unsigned Integer*"

```
=== "Properties"

    | Property        | Value                      |
    |-----------------|----------------------------|
    | **Opcode**      | 22                         |
    | **Type**        | Arithmetic                 |
    | **Operand Type**| Unsigned 64-bit value      |
    | **Destination** | `L3` (implicit)            |
```

```
=== "Algorithm"

    ```
    L3 = L3 % <unsigned_imm>
    L3 = L3 % <reg_val>
    L3 = L3 % <const>
    ```

=== "Example"

    ```
    ; imm +ve
        MODU    1
    ; reg val
        MODU    val(QT)
    ; const
        MODU    SOME_CONST_VAL

    ```
```