

This section describes the available arithmetic **opcodes/mnemonics** and their corresponding operations.

All arithmetic instructions accept **only a single operand**.  
The **other operand**, as well as the **destination**, is taken from one of the **Link registers**:  
**L0, L1, L2, L3**.

🔗 See: [Register Reference – Link Registers](#)

## 1234 Addition

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

- **ADDI** — Add Signed Integer
- **ADDU** — Add Unsigned Integer
- **ADDF** — Add Floating Point

??? abstract "ADDI — *Add Signed Integer*"

```
=== "Properties"

| Property          | Value                                     |
|-----|-----|
| **Opcode**        | 13                                       |
| **Type**           | Arithmetic                             |
| **Operand Type**  | Signed 64-bit integer                  |
| **Destination**   | `L2` (implicit)                        |

=== "Algorithm"

...
L2 = L2 + <signed_imm>
L2 = L2 + <reg_val>
L2 = L2 + <const>
...

=== "Example"

...
;
ADDI 1
;
ADDI -123
;
ADDI val(QT)
;
ADDI SOME_CONST_VAL
```

```
    ;  
    ...
```

??? abstract "ADDU — *Add Unsigned Integer*"

=== "Properties"

Property	Value
-----	-----
**Opcode**	18
**Type**	Arithmetic
**Operand Type**	Unsigned 64-bit value
**Destination**	`L3` (implicit)

=== "Algorithm"

```
    ...  
    L3 = L3 + <unsigned_imm>  
    L3 = L3 + <reg_val>  
    L3 = L3 + <const>  
    ...
```

=== "Example"

```
    ...  
    ADDU 1  
    ADDU val(QT)  
    ADDU SOME_CONST_VAL  
    ...
```

??? abstract "ADDF — *Add Float value*"

=== "Properties"

Property	Value
-----	-----
**Opcode**	23
**Type**	Arithmetic
**Operand Type**	64-bit float value
**Destination**	`L1` (implicit)

=== "Algorithm"

```
    ...  
    L1 = L1 + <float>  
    L1 = L1 + <reg_val>  
    L1 = L1 + <const>  
    ...
```

```
=== "Example"
```

```
    ``
```

```
        ADDF 3.14
```

```
        ADDF val(QT)
```

```
        ADDF SOME_CONST_VAL
```

```
    ``
```

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Opcode	Code	Operand Count	Opernads	Description
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SUBI				
------	--	--	--	--

MULI				
------	--	--	--	--

DIVI				
------	--	--	--	--

MODI				
------	--	--	--	--

ADDU				
------	--	--	--	--

SUBU				
------	--	--	--	--

MULU				
------	--	--	--	--

DIVU				
------	--	--	--	--

MODU				
------	--	--	--	--

ADDF				
------	--	--	--	--

SUBF				
------	--	--	--	--

MULF				
------	--	--	--	--

DIVF				
------	--	--	--	--