Cheat Sheets

Powers Of 2

|  |  |  |
| --- | --- | --- |
| Power | Approx | Exact |
| **1** | 2 | 2 |
| **2** | 4 | 4 |
| **3** | 8 | 8 |
| **4** | 16 | 16 |
| **5** | 32 | 32 |
| **6** | 64 | 64 |
| **7** | 128 | 128 |
| **8** | 256 | 256 |
| **9** | 512 | 512 |
| **10** | 1000 | 1024 |
| **11** | 2000 | 2048 |
| **12** | 4000 | 4096 |
| **13** | 8000 | 8192 |
| **14** | 16000 | 16384 |
| **15** | 32000 | 32768 |
| **16** | 65000 | 65536 |
| **24** | 16 million | 16,777,216 |
| **32** | 4 billion | 4,294,967,296 |
| **64** | 18 quintillion | 18,446,744,073,709,551,616 |
|  |  |  |

Measuring Time

|  |  |  |  |
| --- | --- | --- | --- |
| Unit | Symbol | Description | Detail |
| **Millisecond** | m | One thousandth of a second |  |
| **Microsecond** | μ | One millionth of a second |  |
| **Nanosecond** | n | On billionth of a second |  |

Measuring Space

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Unit | Power (2) | Power 10 (~) | Approximate | Exact |
| **Kilo** | 10 | 3 | 1,000 |  |
| **Mega** | 20 | 6 | 1,000,000 | 1,048,576 |
| **Giga** | 30 | 9 | 1,000,000,000 | 1,073,341,82 |
| **Tera** | 40 | 12 | 1,000,000,000,000 | 1,099,511,627,776 |

Integer Types

|  |  |  |  |
| --- | --- | --- | --- |
| Type | Size (Bytes) | Min | Max |
| **Unsigned Integer** | 4 | 0 |  |
| **Unsigned Integer** | 8 | 0 |  |
| **Signed Integer** | 4 |  |  |
| **Signed Integer** | 8 |  |  |

Char Encoding Point Types

|  |  |
| --- | --- |
| Encoding | Size (Bytes) |
| **ASCII** | 1 |
| **UTF-8** | 1-4 |
| **UTF-16** | 2-4 |

Floating Point Types