

C Integer Constants

Syntax

integer-constant:

*sign*_{opt} *decimal-constant* *integer-suffix*_{opt}

octal-constant *integer-suffix*_{opt}

hexadecimal-constant *integer-suffix*_{opt}

sign: one of

+ **-**

decimal-constant:

nonzero-digit

decimal-constant *digit*

octal-constant:

0

octal-constant *octal-digit*

hexadecimal-constant:

hexadecimal-prefix *hexadecimal-digit*

hexadecimal-constant *hexadecimal-digit*

hexadecimal-prefix: one of

0x **0X**

nonzero-digit: one of

1 **2** **3** **4** **5** **6** **7** **8** **9**

octal-digit: one of

0 **1** **2** **3** **4** **5** **6** **7**

hexadecimal-digit: one of

0 **1** **2** **3** **4** **5** **6** **7** **8** **9**

a **b** **c** **d** **e** **f**

A **B** **C** **D** **E** **F**

integer-suffix:

unsigned-suffix *long-suffix*_{opt}

unsigned-suffix *long-long-suffix*

unsigned-suffix *64-bit-integer-suffix*

long-suffix *unsigned-suffix*_{opt}

long-long-suffix *unsigned-suffix*_{opt}

unsigned-suffix: one of

u **U**

long-suffix: one of

l **L**

long-long-suffix: one of

ll **LL**

```

28
0x1C  /* = Hexadecimal representation for decimal 28 */
034   /* = Octal representation for decimal 28 */

/* Decimal Constants */
int      dec_int      = 28;
unsigned dec_uint     = 4000000024u;
long     dec_long     = 2000000022l;
unsigned long dec_ulong = 4000000000ul;
long long dec_llong    = 9000000000LL;
unsigned long long dec_ullong = 900000000001ull;

/* Octal Constants */
int      oct_int      = 024;
unsigned oct_uint     = 04000000024u;
long     oct_long     = 02000000022l;
unsigned long oct_ulong = 04000000000UL;
long long oct_llong    = 0440000000000001l;
unsigned long long oct_ullong = 04440000000000001Ull;

/* Hexadecimal Constants */
int      hex_int      = 0x2a;
unsigned hex_uint     = 0XA00000024u;
long     hex_long     = 0x200000022l;
unsigned long hex_ulong = 0XA00000021uL;
long long hex_llong    = 0x8a0000000000001l;
unsigned long long hex_ullong = 0x8A40000000000010uLL;

/* Long decimal constants */
10L
79L

/* Long octal constants */
012L
0115L

/* Long hexadecimal constants */
0xaL or 0xAL
0X4fL or 0x4FL

/* Unsigned long decimal constant */
776745UL
778866LU

```

C Floating-Point Constants

Syntax

floating-point-constant:

*sign*_{opt} *fractional-constant* *exponent-part*_{opt} *floating-suffix*_{opt}

*sign*_{opt} *digit-sequence* *exponent-part* *floating-suffix*_{opt}

fractional-constant:

*digit-sequence*_{opt} . *digit-sequence*

digit-sequence .

exponent-part:

e *sign*_{opt} *digit-sequence*

E *sign*_{opt} *digit-sequence*

sign: one of

+ **-**

digit-sequence:

digit

digit-sequence *digit*

floating-suffix: one of

f **l** **F** **L**

C

15.75

1.575E1 /* = 15.75 */

1575e-2 /* = 15.75 */

-2.5e-3 /* = -0.0025 */

25E-4 /* = 0.0025 */

10.0L /* Has type long double */

10.0 /* Has type double */

10.0F /* Has type float */

.0075e2

0.075e1

.075e1

75e-2