

Rank	Operator in C	Description	Result	Associativity
A	()	Grouping	exp	N/A
B1	()	Function call	rexp	L-R
B2	[]	Subscript	lexp	L-R
B3	.	Structure member	lexp	L-R
B4	->	Structure pointer member	lexp	L-R
B5	++	Postfix increment	rexp	L-R
B6	--	Postfix decrement	rexp	L-R
C1	!	Logical negate	rexp	R-L
C2	~	One's complement	rexp	R-L
C3	+	Unary plus	rexp	R-L
C4	-	Unary minus	rexp	R-L
C5	++	Prefix increment	rexp	R-L
C6	--	Prefix decrement	rexp	R-L
C7	*	Indirection (dereference)	lexp	R-L
C8	&	Address of	rexp	R-L
C9	sizeof	Size in bytes	rexp	R-L
D	(type)	Type conversion (cast)	rexp	R-L
E1	*	Multiplication	rexp	L-R
E2	/	Division	rexp	L-R
E3	%	Integer remainder (modulo)	rexp	L-R
F1	+	Addition	rexp	L-R
F2	-	Subtraction	rexp	L-R
G1	<<	Left shift	rexp	L-R
G2	>>	Right shift	rexp	L-R
H1	>	Greater than	rexp	L-R
H2	>=	Greater than or equal	rexp	L-R
H3	<	Less than	rexp	L-R
H4	<=	Less than or equal	rexp	L-R
I1	==	Equal to	rexp	L-R
I2	!=	Not equal to	rexp	L-R
J	&	Bitwise AND	rexp	L-R
K	^	Bitwise exclusive OR	rexp	L-R
L		Bitwise inclusive OR	rexp	L-R
M	&&	Logical AND	rexp	L-R
N		Logical OR	rexp	L-R
O	?:	Conditional	rexp	N/A
P1	=	Assignment	rexp	R-L
P2	+=	Add to	rexp	R-L
P3	-=	Subtract from	rexp	R-L
P4	*=	Multiply by	rexp	R-L
P5	/=	Divide by	rexp	R-L
P6	%=	Modulo by	rexp	R-L
P7	<<=	Shift left by	rexp	R-L
P8	>>=	Shift right by	rexp	R-L
P9	&=	AND with	rexp	R-L
P10	^=	Exclusive OR with	rexp	R-L
P11	=	Inclusive OR with	rexp	R-L
Q	,	Comma	rexp	L-R

Note: All operators within a section (between horizontal lines) have the same precedence and the associativity must be applied.

## Some non-printing control characters

-----  
0 Null  
7 Bell  
8 Backspace  
9 Tab  
10 Line feed  
13 Carriage return  
26 End of file (Ctrl-Z)  
27 [Esc] (Escape key)

## ASCII characters (only 32-127 are standard)

-----  
32        64 @        96 `        128 Ç        160 á        192 L        224 α  
33 !       65 A        97 a        129 ü        161 í        193 ⊥        225 β  
34 "       66 B        98 b        130 é        162 ó        194 ⊥        226 Γ  
35 #       67 C        99 c        131 â        163 ú        195 ⊥        227 π  
36 \$       68 D        100 d       132 ä        164 ñ        196 −        228 Σ  
37 %       69 E        101 e       133 à        165 Ñ        197 ⊥        229 σ  
38 &       70 F        102 f       134 â        166 ª        198 ⊥        230 μ  
39 '       71 G        103 g       135 ç        167 °        199 ⊥        231 τ  
40 (       72 H        104 h       136 ê        168 ¿        200 ⊥        232 Φ  
41 )       73 I        105 i       137 ë        169 ƒ        201 ⊥        233 Θ  
42 \*       74 J        106 j       138 è        170 ¬        202 ⊥        234 Ω  
43 +       75 K        107 k       139 ì        171 ½        203 ⊥        235 δ  
44 ,       76 L        108 l       140 î        172 ¼        204 ⊥        236 ∞  
45 −       77 M        109 m       141 ï        173 ;        205 =        237 φ  
46 .       78 N        110 n       142 Ä        174 «        206 ⊥        238 ε  
47 /       79 O        111 o       143 Å        175 »        207 ⊥        239 ∩  
48 0       80 P        112 p       144 É        176 ☐        208 ⊥        240 ≡  
49 1       81 Q        113 q       145 æ        177 ☐        209 ⊥        241 ±  
50 2       82 R        114 r       146 Æ        178 ☐        210 ⊥        242 ≥  
51 3       83 S        115 s       147 ô        179 ⊥        211 ⊥        243 ≤  
52 4       84 T        116 t       148 ö        180 ⊥        212 ⊥        244 ∫  
53 5       85 U        117 u       149 ò        181 ⊥        213 ⊥        245 ∫  
54 6       86 V        118 v       150 û        182 ⊥        214 ⊥        246 ÷  
55 7       87 W        119 w       151 ù        183 ⊥        215 ⊥        247 ≈  
56 8       88 X        120 x       152 ÿ        184 ⊥        216 ⊥        248 °  
57 9       89 Y        121 y       153 Ö        185 ⊥        217 ⊥        249 ·  
58 :       90 Z        122 z       154 Ü        186 ⊥        218 ⊥        250 ·  
59 ;       91 [        123 {       155 ç        187 ⊥        219 ⊥        251 √  
60 <       92 \        124 |       156 £        188 ⊥        220 ⊥        252 n  
61 =       93 ]        125 }       157 ¥        189 ⊥        221 ⊥        253 ²  
62 >       94 ^        126 ~       158 ₣        190 ⊥        222 ⊥        254 ■  
63 ?       95 \_        127 ð       159 f        191 ƒ        223 ⊥        255

## Common printf formatting codes

-----  
%c - characters  
%s - strings (NULL terminated C strings)  
%d, %i - integers  
%f - floating point  
%g - floating point (minimum digits)  
%e - scientific notation  
%p - pointers (displays in hex)  
%x - hexadecimal integers (Use %X for uppercase)  
%o - octal integers  
%u - unsigned integers  
%ld, %li - long integers  
%lu - unsigned long integers  
%hd, %hi - short integers  
%hu - unsigned short integers