

AND

A	B	$A \wedge B$
T	T	T
T	F	F
F	T	F
F	F	F

AND

A	B	$A \cdot B$
1	1	1
1	0	0
0	1	0
0	0	0

Logical And

A	B	$A \& B$
T	T	T
T	F	F
F	T	F
F	F	F

Bitwise And

A	B	$A \& B$
1	1	1
1	0	0
0	1	0
0	0	0

Binary

A →	1	1	0	0	1	1	1	0
B →	1	0	1	0	0	1	1	1
A & B →	1	0	0	0	0	1	1	0

Decimal

12	14
10	7
8	6

Hexidecimal

B	E
A	7
8	6

Basic Truth Tables including Bit-wise operators for computer programming

C programming

BASE	10	16
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	A	A
11	B	B
12	C	C
13	D	D
14	E	E
15	F	F

OR

A	B	$A \vee B$
T	T	T
T	F	T
F	T	T
F	F	F

OR

A	B	$A + B$
1	1	1
1	0	1
0	1	1
0	0	0

LOGICAL OR

A	B	$A B$
T	T	T
T	F	T
F	T	T
F	F	F

BIT-WISE OR

A	B	$A B$
1	1	1
1	0	1
0	1	1
0	0	0

A →	1	1	0	0	1	1	1	0
B →	1	0	1	0	0	1	1	1
A B →	1	1	1	0	1	1	1	1

12	14
10	7
14	15

B	E
A	7
E	F

8 bits

2 hex numbers for an 8 bit word

the conditional: if A, then B

A implies B

$A \Rightarrow B$

$A \rightarrow B$

The CONVERSE of $A \rightarrow B$ is $B \rightarrow A$

A	B	$A \rightarrow B$
T	T	T
T	F	F
F	T	T
F	F	T

Bonus: truth tables
for conditionals

The biconditional: A if and only if B

A iff B $A \equiv B$

$A \Leftrightarrow B$

$A \leftrightarrow B$

A	B	$A \leftrightarrow B$
T	T	T
T	F	F
F	T	F
F	F	T