Practice Problem 2.14 (solution page 183)

Suppose that **a** and **b** have byte values **0x55** and **0x46**, respectively. Fill in the following table indicating the byte values of the different C expressions:

Expression	Value	Expression	Value
a & b	0x44	**a && b**	0x01
a | b	0x57	**a || b**	0x01
~a | ~b	0xBB	**!a || !b**	0x00
a & !b	0x00	**a && ~b**	0x01

a = 0x5 → 5 → 0101 0101

b = 0x4 → 6 → 0100 0110

a & b = 0100 0100 = 0x44

a | b = 0101 0111 = 0x57

~a | ~b = (1010 1010) | (1011 1001)
= 1011 1011
= 0xBB

a & !b = a & 0x00 = 0x00

a && b = 0x01

a || b = 0x01

!a || !b = 0x00 || 0x00 = 0x00

a && ~b = 0x01