
4-bit adder**X64833_en**

Design a circuit that performs the addition of two 4-bit numbers. The result $(\text{mod } 16)$ must be represented in 4 bits also.

Specification

```
module adder4(a, b, sum);
    input [3:0] a, b;
    output [3:0] sum;
```

Hint

You may want to use several instances of a 1-bit full adder.

Input

- a and b are the two 4-bit number.

Output

- sum is the 4-bit output representing $(a + b) \text{ mod } 16$.

Problem information

Author: Jordi Cortadella

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