
Full adder

X12983_en

Design a **full adder**. A full adder is a circuit that performs a 1-bit addition receiving an input carry and generating an output carry.

Specification

```
module full_adder(a, b, cin, sum, cout);  
    input a, b, cin;  
    output sum, cout;
```

Input

- *a* and *b* are the two inputs.
- **cin** is the input carry.

Output

- *sum* is the sum of the two bits and the input carry.
- **cout** is the output carry.

Problem information

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