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## Add 7 bits

X31534\_en

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Design a circuit that receives 7 inputs and generates a 3-bit output. The output represents the number of ones at the inputs.

### Specification

```
module add7bits(in, out);  
    input [6:0] in;  
    output [2:0] out;
```

### Hint

Use only full adders.

### Input

- *in* is the input vector with 7 signals.

### Output

- *out* is a 3-bit number representing the number of ones at the inputs.

### Problem information

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