



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

```
    wire w[4:0] ;
```

```
    xor
```

```
    # (10) g1 (w[0], b, sel),
```

```
    # (10) g2 (w[1], w[0], a),
```

```
    # (10) g4 (sum, w[1], cin);
```

```
    and
```

```
    # (w) g3 (w[2], w[0], a),
```

```
    # (w) g5 (w[3], w[1], cin);
```

```
    or
```

```
    # (w) g6 (cout, w[2], w[3]);
```

```
endmodule
```