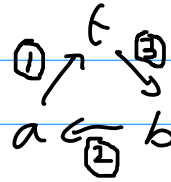


Swap a + b

→ $t = a$
 $a = b$
 $b = t$



$$a \wedge = b$$

$$b \wedge = a$$

$$a \wedge = b$$

$$a \quad 11001100$$

$$b \quad 01010101$$

$$a' \quad \underline{10011001}$$

$$b' \quad 11001100 \quad \text{old } a$$

$$a'' \quad 01010101 \quad \text{old } b$$

Euclid's algorithm

300 BCE

```
while (b != 0) {
    t = a % b
    a = b
    b = t
}
```