



Na Przypale Albo Wcale

# Justyna To Chleb

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# Data structures (1)

extended-gcd/main.cpp

**Description:** Dla danego  $(a, b)$  znajduje takie  $(gcd(a, b), x, y)$ , że  $ax + by = gcd(a, b)$

**Time:**  $\mathcal{O}(\log(\max(a, b)))$

**Memory:** same

**Usage:** int gcd, x, y;

tie(gcd, x, y) = extendedGcd(a, b); 402db5, 7 lines

```
tuple<LL, LL, LL> extendedGcd(LL a, LL b) {
    if (a == 0)
        return {b, 0, 1};
    LL x, y, nwd;
    tie(nwd, x, y) = extendedGcd(b % a, a);
    return {nwd, y - x * (b / a), x};
}
```