

多项式求逆

准备工作

```
void calc_rev(int &n,int &lim,const int m) {
    n = 1,lim = 0;
    while(n < m) n <<= 1,lim++;
    for(int i = 1; i < n; i++) rev[i] = (rev[i >> 1] >> 1) | ((i & 1) << lim
- 1);
}
```

递归复杂度 $O(n \log n)$

```
void Inv(const int *a,int *b,const int len) { //多项式求逆
    static int c[N];
    if(len == 1) {
        b[0] = qpow(a[0],mod - 2);
        return;
    }
    Inv(a,b,len + 1 >> 1);
    int n,lim;
    calc_rev(n,lim,len << 1);
    for(int i = 0; i < n; i++) c[i] = a[i];
    for(int i = len; i < n; i++) c[i] = 0;
    NTT(c,n,1),NTT(b,n,1);
    for(int i = 0; i < n; i++) b[i] = (2 - (ll)c[i] * b[i] % mod + mod) *
b[i] % mod;
    NTT(b,n,-1);
    for(int i = len; i < n; i++) b[i] = 0;
}
```

检查的方法:随机一个多项式求逆两次看看是不是自己。

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