

欧拉降幂

```
#include <bits/stdc++.h>
#define ll __int64
using namespace std;

char a[1000006];
ll x, z;
ll quickpow(ll x, ll y, ll z){
    ll ans = 1;
    while(y){
        if(y&1) ans = ans * x % z;
        x = x * x % z;
        y >>= 1;
    }
    return ans;
}
ll phi(ll n){
    ll i, rea = n;
    for(i = 2; i * i <= n; i++){
        if(n % i == 0){
            rea = rea - rea / i;
            while(n % i == 0)
                n /= i;
        }
    }
    if(n > 1) rea = rea-rea/n;
    return rea;
}
int main(){
    while(scanf("%lld %s %lld", &x, a, &z) != EOF){
        ll len = strlen(a);
        ll p = phi(z);
        ll ans = 0;
        for(ll i = 0; i < len; i++){
            ans = (ans*10 + a[i]-'0')%p;
        }
        ans += p;
        printf("%lld\n", quickpow(x, ans, z));
    }
    return 0;
}
```