166. Fraction to Recurring Decimal

Medium

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Given two integers representing the numerator and denominator of a fraction, return the fraction in string format.

If the fractional part is repeating, enclose the repeating part in parentheses.

Example 1:

Input: numerator = 1, denominator = 2  
Output: "0.5"

Example 2:

Input: numerator = 2, denominator = 1  
Output: "2"

Example 3:

Input: numerator = 2, denominator = 3  
Output: "0.(6)"

class Solution {

public:

string fractionToDecimal(int64\_t n, int64\_t d) {

if(n==0) return "0";

string res;

if(n<0^d<0) res+="-";

n=abs(n);

d=abs(d);

res+=to\_string(n/d);

if(n%d==0) return res;

res+=".";

unordered\_map<int,int> map;

for(int64\_t r=n%d;r;r=r%d){

if(map.count(r)){

res.insert(map[r],1,'(');

res+=")";

break;

}

map[r]=res.size();

r\*=10;

res+=to\_string(r/d);

}

return res;

}

};

Success

[Details](https://leetcode.com/submissions/detail/211757228/)

Runtime: 4 ms, faster than 100.00% of C++ online submissions for Fraction to Recurring Decimal.

Memory Usage: 8.8 MB, less than 86.67% of C++ online submissions forFraction to Recurring Decimal.