FenwickTree (BIT) sum query on 1D-Array (range update-query):

```cpp

//answer range update and range query
struct FenwickTreeSum{
    int n;
    vector<ll> M , A;

    FenwickTreeSum(int n){
        this->n = n;
        M.assign(n , 0);
        A.assign(n , 0);
    }

    FenwickTreeSum(vector<ll> &a) : FenwickTreeSum(a.size()) {
        for (int i = 0; i < a.size(); i++){
            update(i , i , a[i]);
        }
    }

    void upd(int i, ll mul, ll add){
        while (i < n){
            M[i] += mul;
            A[i] += add;
            i |= (i + 1);
        }
    }

    void update(int l, int r, ll x){
        upd(l, x, -x * (l - 1));
        upd(r, -x, x * r);
    }

    ll query(int i){
        ll mul = 0, add = 0;
        ll st = i;
        while (i >= 0) {
            mul += M[i];
            add += A[i];
            i = (i & (i + 1)) - 1;
        }
        return (mul * st + add);
    }

    ll query(int l, int r){
        return query(r) - query(l - 1);
    }
};
```