**Maximum Profit by Buying and Selling a Share at Most Twice**

let price = [100, 30, 15, 10, 8, 25, 80];

let price0 = [ 2, 30, 15, 10, 8, 25, 80]

let price1 = [10, 22, 5, 75, 65, 80];

let price2 = [90, 80, 70, 60, 50];

function profitTable(price) {

    let profit = []

    for(let i=0; i<price.length; i++) {

        profit[i] = 0

    }

    return profit

}

function calculateMaxProfit(price) {

    let n = price.length

    let profit = profitTable(price)

    let max\_price  = price[n-1];

    for(let i = n-2; i >= 0; i--) {

        if(price[i] > max\_price ) {

            max\_price  = price[i]

        }

        profit[i]  = Math.max(profit[i + 1],

            max\_price  - price[i])

    }

    let min\_price = price[0];

    for(let i = 1; i < n; i++) {

        if(price[i] < min\_price) {

            min\_price = price[i]

        }

        profit[i]  = Math.max(profit[i - 1],

            profit[i] +  (price[i] - min\_price))

    }

    let result = profit[n - 1];

    return result;

}

console.log(calculateMaxProfit(price))

console.log(calculateMaxProfit(price1))

console.log(calculateMaxProfit(price2))

console.log(calculateMaxProfit(price0))