You are given an array of n numbers and q queries. For each query you have to print the floor of the expected value(mean) of the subarray from L to R.

Ip

First line contains two integers N and Q denoting number of array elements and number of queries.

Next line contains N space seperated integers denoting array elements.

Next Q lines contain two integers L and R(indices of the array).

Op

print a single integer denoting the answer.

Constraints

1<= N ,Q,L,R <= 10^6

1<= Array elements <= 10^9

Tc 1

5 3

1 2 3 4 5

1 3

2 4

2 5

Eo

2

3

3