
Range sum query

Input file: **standard input**
Output file: **standard output**
Time limit: 1.5 seconds
Memory limit: 256 megabytes

Given **2** numbers N and Q , an array A of N number and Q number of pairs L, R . For each query Q print a single line that contains the **summation** of all numbers from index L to index R .

Input

First line contains two numbers N, Q ($1 \leq N, Q \leq 10^5$) where N is number of elements in A and Q is number of query pairs.

Second line contains N numbers ($1 \leq A_i \leq 10^9$).

Next Q lines contains L, R ($1 \leq L \leq R \leq N$).

Output

For each query Q print a single line that contains the **summation** of all numbers from index L to index R .

Examples

standard input	standard output
6 3 6 4 2 7 2 7 1 3 3 6 1 6	12 18 28
4 3 5 5 2 3 1 3 2 3 1 4	12 7 15