2020 VISION

In order to encourage walking in the countryside within which is nestled that knot of villages known as *The Endians*, fixed telescopes have been mounted along a path. There walkers can gaze upon bright gardens, ancient forests and romantic chasms. There walkers can pause and take stock of the world. There walkers can curse the telescopes as they take their money and refuse to work.

Along the path n telescopes have been placed and the satisfaction a walker receives each time they use the i^{th} telescope is s_i. After visiting a telescope a walker can travel to an adjacent telescope; *i+1* or *i-1*, except at the extremes of a path where there is only one adjacent telescope. Walkers are obliged by local ordinance to use a telescope each time it is reached, all walkers begin at the first telescope and walkers are only permitted to use a telescope once before they move to another telescope.

The j^{th} walker on the path uses telescopes on u_j occasions and wants to maximise the sum of their satisfaction from using telescopes on their walk.

For example, suppose the satisfaction values (in order) are 1, 2, 3, -1, -1, 10

- If a walker visits 5 telescopes their maximum satisfaction is 11 (1→2→3→2→3);
- If a walker visits 6 telescopes their maximum satisfaction is 14 (1→2→3→-1→-1→10);

SAMPLE INPUT

```
6 2
1
2
3
-1
-1
10
5
6
```

The first line of input will consist of two integers, t ($1 < t < 2^{20}$) then w ($1 \leq w < 2^{20}$), indicating the number of telescopes and walkers. Each of the next t lines will consist of a single integer, s_i ($-2^{20} < s_i < 2^{20}$), indicating the satisfaction received from the i^{th} telescope. Each of the next w lines will consist of a single integer, u_j ($1 \leq u_j < 2^{20}$), indicating the number of occasions the j^{th} walker will use a telescope.

You should output a single integer, the sum of the walkers' maximised satisfactions.

SAMPLE OUTPUT

```
25
```