Given an array of integers A and let *n* to be its length.

Assume Bk to be an array obtained by rotating the array A *k* positions clock-wise, we define a "rotation function" F on A as follow:

F(k) = 0 \* Bk[0] + 1 \* Bk[1] + ... + (n-1) \* Bk[n-1].

Calculate the maximum value of F(0), F(1), ..., F(n-1).

**Note:**  
*n* is guaranteed to be less than 105.

**Example:**

A = [4, 3, 2, 6]

F(0) = (0 \* 4) + (1 \* 3) + (2 \* 2) + (3 \* 6) = 0 + 3 + 4 + 18 = 25

F(1) = (0 \* 6) + (1 \* 4) + (2 \* 3) + (3 \* 2) = 0 + 4 + 6 + 6 = 16

F(2) = (0 \* 2) + (1 \* 6) + (2 \* 4) + (3 \* 3) = 0 + 6 + 8 + 9 = 23

F(3) = (0 \* 3) + (1 \* 2) + (2 \* 6) + (3 \* 4) = 0 + 2 + 12 + 12 = 26

So the maximum value of F(0), F(1), F(2), F(3) is F(3) = 26.