# Shooting Game

Problem Code: SHOOTING

Design Challenge

Task Description

You are participating in a shooting game. n targets are arranged ahead of you in a row. Each target has a number of points which will be given to you if you take it down. However, the game is a bit hard: You can only shoot once. Luckily, your gun is a little special. It can hit m consecutive targets with one fire. So you wonder, what is the maximum points you can get with one shot?

See below for an example. There are $n = 8$ targets (with their scores written) and your gun has a range of $m = 3$. The maximum points you can get is 12. For that you shoot the 5th (5 points), 6th (4 points) and 7th (3 points) targets (counting from left).
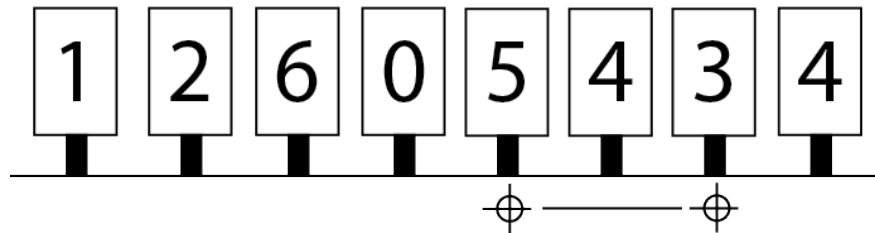
Constraints

$1 \leq m \leq n$, scores are all non-negative integers.

Examples

Case 1: $n = 8, m = 3$, scores are $[1, 2, 6, 0, 5, 4, 3, 4]$

Answer: 12

See the above illustration.

Case 2: $n = 6, m = 2$, scores are $[1, 2, 3, 3, 2, 1]$

Answer: 6

Obviously, the middle two objects with 3 points each are the most worthy targets.

Case 3: $n = 7, m = 1$, scores are $[1, 7, 2, 9, 3, 4, 5]$

Answer: 9

Well.. your gun turns out to be not special. So you choose the target with the most points.

Case 4: $n = 5, m = 5$, scores are $[1, 2, 3, 4, 5]$

Answer: 15

Yeah. Your gun is just too powerful to take down everything.

Requirements

Time: $O(n)$ **Space:** $O(n)$