Ivancho really wants to be a weatherman. Before that, however, he must first go through the necessary training. Now he can not solve one of his assignments and urgently needs your help.

He was given the temperatures in a city of **N** consecutive days. Temperatures are integers between -100 and 100. He is asked to calculate the difference between the maximum and minimum average temperatures from arbitrary **K** consecutive days.

**Note: Reading from a file and printing into a file is done by adding an operator for that. You can use the freopen operator by turning on the cstdio library and adding the following two lines to the beginning of your main function: freopen ("temperatures.in", "r", stdin); freopen ("temperatures.out", "w", stdout);**

**Input**

The first row of the file temperatures.in contains two integers **N** and **K**.

**Output**

In the output file temperatures.out print one number **rounded to exactly 2 decimal places** - the difference between the maximum and minimum average temperature from arbitrary K consecutive days.

**Constraints**

1 ≤ *N* ≤ 100

1 ≤ *K* ≤ N

The temperature in each one of the N days is an integer between -100 and 100.

**Time limit: 1.0 sec**

**Memory limit: 256 MB**

**Example test**

|  |  |
| --- | --- |
| **Input (temperatures.in)** | **Output (temperatures.out)** |
| 5 2  1 3 5 4 2 | 2.50 |

**Clarifications**

The minimum average temperature from 2 consecutive days is (1 + 3) / 2 = 2 and the maximum is (5 + 4) / 2 = 4.5, so the answer is 4.5 – 2 = 2.50.