**Problem Description**

Sparko is beagle that lives in BeagleTown, and his birthday is close, his friends want to celebrate him with a gourmet dinner of three plates -- one pair, plus an EXTRA long plate to get some big food. As you may guess, the length of the two shorter plates should be as close as possible, but the length of the extra one is not important, as long as it's the longest. To make things clearer, for the set of plates with diameter A, B, C (A<=B<=C), (A-B)^2 is called the “error” of the set. For the Sparko’s birthday! are invited K beagles to join his party, and would like to introduce his way of using plates. You should find a way of composing the K sets, so that the total “error” of all the sets is minimized. It's known that (K\*3) <= N.

**Input**

The first line in the input contains two integers K, N(0<=K<=1000, 3K<=N<=5000), the number of guests (K) and the number of plates (N). There are N positive integers Li on the next line in ascending order indicating the diameters of the plates.(1<=Li<=32000).

**Output**

Print a line containing the minimal total “error” of all the sets.

**Sample Input**

9 40  
1 8 10 16 19 22 27 33 36 40 47 52 56 61 63 71 72 75 81 81 84 88 96 98 103 110 113 118 124 128 129 134 134 139 148 157 157 160 162 164

**Sample Output**

23