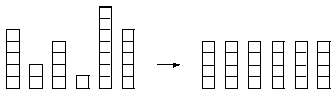
|  |
| --- |
| Box of Bricks |

Little Bob likes playing with his box of bricks. He puts the bricks one upon another and builds stacks of different height. ``Look, I've built a wall!'', he tells his older sister Alice. ``Nah, you should make all stacks the same height. Then you would have a real wall.'', she retorts. After a little con- sideration, Bob sees that she is right. So he sets out to rearrange the bricks, one by one, such that all stacks are the same height afterwards. But since Bob is lazy he wants to do this with the minimum number of bricks moved. Can you help?



**Input**

The input consists of several data sets. Each set begins with a line containing the number *n* of stacks Bob has built. The next line contains *n* numbers, the heights *hi* of the *n* stacks. You may assume $1 Ÿ\le n \leŸ 50$and $1 \leŸ h_i Ÿ\le 100$.

The total number of bricks will be divisible by the number of stacks. Thus, it is always possible to rearrange the bricks such that all stacks have the same height.

The input is terminated by a set starting with *n* = 0. This set should not be processed.

**Output**

For each set, first print the number of the set, as shown in the sample output. Then print the line ``The minimum number of moves is *k*.'', where *k* is the minimum number of bricks that have to be moved in order to make all the stacks the same height.

Output a blank line after each set.

**Sample Input**

6

5 2 4 1 7 5

0

**Sample Output**

Set #1

The minimum number of moves is 5.

*Miguel A. Revilla   
1998-03-10*

6

5 2 4 1 7 5

8

26 75 46 10 40 88 31 84

14

7 38 25 97 29 28 43 54 71 55 98 58 41 14

19

6 16 93 32 65 49 97 64 80 34 14 91 87 4 50 71 54 45 55

12

80 72 49 53 69 68 65 67 12 67 16 18

26

7 22 50 13 19 19 13 93 40 20 6 43 76 89 42 27 5 52 53 11 99 82 63 93 22 59

48

35 81 15 22 48 34 82 81 60 12 43 11 10 61 53 59 81 10 18 48 32 99 29 6 30 62 86 68 23 61 57 84 64 19 30 56 94 15 6 85 37 68 27 10 41 63 43 1

34

22 4 16 8 67 28 30 71 26 83 57 70 37 33 77 26 15 65 8 93 49 59 47 98 32 33 84 89 79 61 44 90 8 91

40

73 88 91 49 11 90 87 36 93 89 63 12 53 53 27 24 48 17 95 61 57 7 21 94 40 46 43 63 93 54 72 69 48 70 29 11 8 16 36 43

16

45 75 31 99 48 96 99 78 63 2 34 20 96 51 94 13

29

56 90 13 34 81 83 47 66 13 85 57 44 14 35 60 97 19 66 36 83 66 74 30 3 50 28 75 20 25

23

51 3 23 54 93 9 61 6 36 82 5 48 43 6 46 47 67 80 61 47 26 42 99

18

95 20 58 57 7 61 32 58 25 76 64 43 72 34 56 55 68 19

10

100 71 74 10 9 23 51 17 83 62

0

Set #1↵\r\n

The minimum number of moves is 5.↵\r\n

↵\r\n

Set #2↵\r\n

The minimum number of moves is 97.↵\r\n

↵\r\n

Set #3↵\r\n

The minimum number of moves is 151.↵\r\n

↵\r\n

Set #4↵\r\n

The minimum number of moves is 227.↵\r\n

↵\r\n

Set #5↵\r\n

The minimum number of moves is 117.↵\r\n

↵\r\n

Set #6↵\r\n

The minimum number of moves is 336.↵\r\n

↵\r\n

Set #7↵\r\n

The minimum number of moves is 566.↵\r\n

↵\r\n

Set #8↵\r\n

The minimum number of moves is 434.↵\r\n

↵\r\n

Set #9↵\r\n

The minimum number of moves is 468.↵\r\n

↵\r\n

Set #10↵\r\n

The minimum number of moves is 228.↵\r\n

↵\r\n

Set #11↵\r\n

The minimum number of moves is 339.↵\r\n

↵\r\n

Set #12↵\r\n

The minimum number of moves is 251.↵\r\n

↵\r\n

Set #13↵\r\n

The minimum number of moves is 170.↵\r\n

↵\r\n

Set #14↵\r\n

The minimum number of moves is 141.↵\r\n

↵\r\n