Billy hates Math!!!!

Billy's teacher has assigned him math homework. His assignment is to find the range of numbers in a given list of numbers.

Billy is very lazy, so he wants an efficient way to find the range without having to search for the numbers manually.

He needs your help to write a program that can find the range in a list of numbers.

Instructions

Problem

Determine the range (difference between the maximum number and the minimum number) in a given list of integers (bonus mark: don't use a built-in sorting method to solve this problem).

Input Specification

The first line will contain the integer n ($5 \leq n \leq 15$). The following n lines will contain an integer k ($1 \leq k \leq 100$), and these n integers constitute the aforementioned list.

Output Specification

Print out the range in the given list of integers.

Samples:

7
14
21
15
47
69
48
19
ans =
55

10
57
17
29

20
91
8
93
64
5
78
ans =
88