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Ankush23s

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Points: 289.00 Rank: 9045

# Introduction to Sets

by DOSHI

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A *set* is an unordered collection of elements without duplicate entries.  
When printed, iterated or converted into a sequence, its elements will appear in an arbitrary order.

## Example

```
>>> print set()
set([])

>>> print set('HackerRank')
set(['a', 'c', 'e', 'H', 'k', 'n', 'r', 'R'])

>>> print set([1,2,1,2,3,4,5,6,0,9,12,22,3])
set([0, 1, 2, 3, 4, 5, 6, 9, 12, 22])

>>> print set((1,2,3,4,5,5))
set([1, 2, 3, 4, 5])

>>> print set(set(['H','a','c','k','e','r','r','a','n','k']))
set(['a', 'c', 'r', 'e', 'H', 'k', 'n'])

>>> print set({'Hacker' : 'DOSHI', 'Rank' : 616 })
set(['Hacker', 'Rank'])

>>> print set(enumerate(['H','a','c','k','e','r','r','a','n','k']))
set([(6, 'r'), (7, 'a'), (3, 'k'), (4, 'e'), (5, 'r'), (9, 'k'), (2, 'c'), (0, 'H'), (1, 'a'), (8, 'n')])
```

Basically, sets are used for membership testing and eliminating duplicate entries.

## Task

Now, let's use our knowledge of sets and help Mickey.

Ms. Gabriel Williams is a botany professor at District College. One day, she asked her student Mickey to compute the average of all the plants with distinct heights in her greenhouse.

Formula used:

$$\text{Average} = \frac{\text{Sum of Distinct Heights}}{\text{Total Number of Distinct Heights}}$$

## Input Format

The first line contains the integer,  $N$ , the total number of plants.

The second line contains the  $N$  space separated heights of the plants.

## Constraints

$$0 < N \leq 100$$

## Output Format

Output the average height value on a single line.

## Sample Input

```
10
161 182 161 154 176 170 167 171 170 174
```

## Sample Output

```
169.375
```

## Explanation

Here, `set([154, 161, 167, 170, 171, 174, 176, 182])` is the set containing the distinct heights. Using the `sum()` and `len()` functions, we can compute the average.

$$Average = \frac{1355}{8} = 169.375$$

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Submissions: 8118

Max Score: 10

Difficulty: Easy

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```
1 n = input()
2 p = raw_input()
3
4 l = p.split()
5 li = map(int,l)
6 s = set(li)
7 sum = 0.0
8
9 for i in s:
10     sum = sum + {i}.pop()
11
12 avg = sum/len(s)
13 print(avg)
14
```

Line: 14 Col: 1

 [Upload Code as File](#)

Test against custom input

Run Code

Submit Code

**Congrats, you solved this challenge!**

✓ Test Case #0

✓ Test Case #1

✓ Test Case #2

✓ Test Case #3

✓ Test Case #4

✓ Test Case #5

You've earned 10.00 points!

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