# Exercise: Lambda and Built-In Functions

Problems for exercise and homework for the [Python Advanced Course @SoftUni](https://softuni.bg/courses/python-advanced). Submit your solutions in the SoftUni judge system at <https://judge.softuni.bg/Contests/1841>

## Sort Names

Write a program that receives a list of names, separated by **space** and prints the names **sorted in descending order.**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| Gosho Stamat Pesho Stefan | Stefan Stamat Pesho Gosho |

## Sort Numbers

Write a program that receives a list of strings. **Keep the numbers**, **remove the names** and check if the numbers are bigger than the i**nitial length of the list**. Then print the numbers in **ascending order**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| nuGosho 7 10 St20amat Pesho 3 47 | 10 47 |

## Multiplication

You will receive **a number and a list of numbers.** **Multiply each number** with the initial number and **print the result.**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 7  2 3 4 5 6 | 14 21 28 35 42 |

## Sort

You will receive a **list of numbers**. **Remove** the positive numbers, **sum** the negative numbers and **print the absolute value.**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| -1 2 -3 4 5 6 -7 -9 -25 | 45 |

## Whole Number

You will receive a **list of numbers**. **Round** every number and **print** the total sum **multiplied** by the length of the initial list.

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4.3 5.6 5.5 1.2 7.9 | 125 |

## Unique Numbers

You will receive a **list of numbers**. **Round the numbers, print** the min and max and **multiply** the numbers by 3. **Print** only the **unique numbers in ascending order** separated by space.

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 7 9 15 432 1.2 0.2 0.5 1 6 | 0  432  0 3 18 21 27 45 1296 |

## Unique Names

You will receive a **list of names**. **Filter** the bad names and print the **total sum of the length of the names**. A **valid name** is a name that starts with an **uppercase letter** and **the rest is in lower case**.

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| Pesho Gosho staMaT PresLav Stefan Martin | 22 |

## Negative vs Positive

You will receive a **list of numbers**. **Separate** the negative numbers from the positive. Find the **total sum of the negatives and positives**, **replace** the negative number with its **absolute value** and **print the following:**

If the **absolute negative number** is bigger than the **positive number**:  
 **"The negatives are stronger than the positives"**

If the **positive number** is bigger than the **absolute negative number**:  
 **"The positives are stronger than the negatives"**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1 2 -3 -4 65 -98 12 57 -84 | -189  137  The negatives are stronger than the positives |

## Odd or Even

You will receive a **command** and a **list of numbers**:

If the command is **"Odd"**: Print the **sum of the Odd** numbers multiplied by the **length** of the initial list.

If the command is **"Even"**: Print the **sum of the Even** numbers multiplied by the **length** of the initial list.

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| Odd  1 3 5 34 7 9 12 11 13 10 | 490 |