Python Sheet

Q1: Take from user x number and **prints the factorial of number X**

HINT: make a function to do the factorial and use it

Q2: Write a Program to **Count the Number of Zeros in A Number**

Examples

input

```
10120022210
```

output

```
4
```

Q3: Given a list of strings, create two lists, the first one has half of each string, and the other list contains the other half of the strings

Q4: Given two numbers A and B. Print all **lucky numbers** between A and B **inclusive**.

Note:
*The **Lucky number** is any positive number that its decimal representation contains only **4** and **7**.*
***For example:** numbers **4, 7, 47**, and **744** are **lucky** and numbers **5, 17**, and **174** are **not**.*

Print all **lucky numbers** between A and B **inclusive** separated by a space if there is **no lucky number** print **-1**.

Examples

input

```
4 20
```

output

```
4 7
```

input

```
8 15
```

output

```
-1
```

Q5: Given a number *N* and an array *A* of *N* digits **(not separated by space)**. Print the **summation** of these digits.

input

```
N=5
13305
```

output

```
12
```

Q6: Write a program to find the **second largest** and **second smalles**t number in a list. **[Do not use any built-in functions]**

Q7: Write a Python function that takes a list and returns a new list with unique elements of the first list. **Do not use built-in functions**

input

```
[5,7,7,8,8,8,10]
```

output

```
[5,7,8,10]
```

Q8: not a code question:

Describe what you know about OOP in a short paragraph

Q9: Write a program to calculate the area of a parallelogram given two of its sides and the angle between them. Using class & object**.** **Use OOP to build this program**

the data entered by the user.

Q10: Write a **Python class** named Circle constructed from a radius and two methods that will compute the area and the perimeter of a circle.