Question 1

Create a function that takes a number as an argument and returns True or False depending

on whether the number is symmetrical or not. A number is symmetrical when it is the same as

its reverse.

Examples

is\_symmetrical(7227) ➞ True

is\_symmetrical(12567) ➞ False

is\_symmetrical(44444444) ➞ True

is\_symmetrical(9939) ➞ False

is\_symmetrical(1112111) ➞ True

A:

def symmetrical(n):

string=str(num)

half = int(len(string) / 2)

if len(string) % 2 == 0: # even

first\_str = string[:half]

second\_str = string[half:]

else: # odd

first\_str = string[:half]

second\_str = string[half+1:]

if first\_str == second\_str[::-1]:

return True

else:

return False

n=int(input())

symmetrical(n)

Question 2

Given a string of numbers separated by a comma and space, return the product of the

numbers.

Examples

multiply\_nums(&quot;2, 3&quot;) ➞ 6

multiply\_nums(&quot;1, 2, 3, 4&quot;) ➞ 24

multiply\_nums(&quot;54, 75, 453, 0&quot;) ➞ 0

multiply\_nums(&quot;10, -2&quot;) ➞ -20

A:

def multiply\_nums(s):

s = s.split(',')

print(s)

product = 1

for i in s:

product = product \* int(i)

return product

multiply\_nums("10,-2")

Question 3

Create a function that squares every digit of a number.

Examples

square\_digits(9119) ➞ 811181

square\_digits(2483) ➞ 416649

square\_digits(3212) ➞ 9414

Notes

The function receives an integer and must return an integer.

A:

def squares(num):

s = ""

for i in str(num):

y = int(i) \* int(i)

s += str(y)

return s

x=squares(9119)

x

Question 4

Create a function that sorts a list and removes all duplicate items from it.

Examples

setify([1, 3, 3, 5, 5]) ➞ [1, 3, 5]

setify([4, 4, 4, 4]) ➞ [4]

setify([5, 7, 8, 9, 10, 15]) ➞ [5, 7, 8, 9, 10, 15]

setify([3, 3, 3, 2, 1]) ➞ [1, 2, 3]

A:

def setify(l1):

l=[]

for i in l1:

if i not in l:

l.append(i)

return l

a=setify([1,3,5,4,5,3,4,1])

x=setify(a)

print(x)

print(sorted(x))

Question 5

Create a function that returns the mean of all digits.

Examples

mean(42) ➞ 3

mean(12345) ➞ 3

mean(666) ➞ 6

Notes

 The mean of all digits is the sum of digits / how many digits there are (e.g. mean of digits in

512 is (5+1+2)/3(number of digits) = 8/3=2).

 The mean will always be an integer.

A:

def mean\_ele(n):

a=0

for digit in str(n):

a+= int(digit)

a=a/len(str(n))

return round(a,2)

n=int(input())

mean\_ele(n)