Question1. Write a function that stutters a word as if someone is struggling to read it. The first two letters are repeated twice with an ellipsis ... and space after each, and then the word is pronounced with a question mark ?.

**Examples**

stutter("incredible") ➞ "in... in... incredible?"

stutter("enthusiastic") ➞ "en... en... enthusiastic?"

stutter("outstanding") ➞ "ou... ou... outstanding?"

Hint :- Assume all input is in lower case and at least two characters long.

word = input("Enter Stutter word: ")

print(f"{word[:2]}... {word[:2]}... {word}?")

word = input("Stutter word")

def stutter(word):

stuttered\_word = word[:2] + " ... " + word[:2] + " ... " + word + "?"

return stuttered\_word

stuttered\_word = stutter(word)

print(stuttered\_word)

Question 2.Create a function that takes an angle in radians and returns the corresponding angle in degrees rounded to one decimal place.

### Examples

radians\_to\_degrees(1) ➞ 57.3

radians\_to\_degrees(20) ➞ 1145.9

radians\_to\_degrees(50) ➞ 2864.8

def Convert(radian):

pi = 3.14159

degree = radian \* (180/pi)

return degree

radian = int(input("Enter value of radisan : "))

print("degree =", round((Convert(radian)), 1))

Question 3. In this challenge, establish if a given integer num is a Curzon number. If 1 plus 2 elevated to num is exactly divisible by 1 plus 2 multiplied by num, then num is a Curzon number.

Given a non-negative integer num, implement a function that returns True if num is a Curzon number, or False otherwise.

### Examples

is\_curzon(5) ➞ True

# 2 \*\* 5 + 1 = 33

# 2 \* 5 + 1 = 11

# 33 is a multiple of 11

is\_curzon(10) ➞ False

# 2 \*\* 10 + 1 = 1025

# 2 \* 10 + 1 = 21

# 1025 is not a multiple of 21

is\_curzon(14) ➞ True

# 2 \*\* 14 + 1 = 16385

# 2 \* 14 + 1 = 29

# 16385 is a multiple of 29

def curzon\_Num(num):

seq = 2 \*\* num + 1

add = 2 \* num + 1

return seq % add == 0

num = int(input("Enter a number : "))

print(curzon\_Num(num))

Question 4.Given the side length x find the area of a hexagon.



### Examples

area\_of\_hexagon(1) ➞ 2.6

area\_of\_hexagon(2) ➞ 10.4

area\_of\_hexagon(3) ➞ 23.4

import math as m

def hex\_area(num):

return (((3 \* m.sqrt(3)) \* (num \* num)) / 2 )

num = int(input("Enter number : "))

print("Area of hexagon : ", round((hex\_area(num)),1))

Question 5. Create a function that returns a base-2 (binary) representation of a base-10 (decimal) string number. To convert is simple: ((2) means base-2 and (10) means base-10) 010101001(2) = 1 + 8 + 32 + 128.

Going from right to left, the value of the most right bit is 1, now from that every bit to the left will be x2 the value, value of an 8 bit binary numbers are (256, 128, 64, 32, 16, 8, 4, 2, 1).

### Examples

binary(1) ➞ "1"

# 1\*1 = 1

binary(5) ➞ "101"

# 1\*1 + 1\*4 = 5

binary(10) ➞ "1010"

# 1\*2 + 1\*8 = 10

def decimal\_to\_binary(decimal\_str):

# Convert the base-10 string to an integer

decimal\_int = int(decimal\_str)

# Initialize an empty list to store the binary digits

binary\_digits = []

# Divide the integer by 2 and store the remainder as the least significant digit

while decimal\_int > 0:

binary\_digits.append(str(decimal\_int % 2))

decimal\_int //= 2

# Reverse the list and join the digits to create the binary string representation

binary\_str = ''.join(reversed(binary\_digits))

# Return the binary string representation

return binary\_str

decimal\_str = int(input("Enter integer : "))

print(decimal\_to\_binary(decimal\_str))