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.

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

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

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

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

Answer 1:

def stutter(word): first_two = word[:2] return f"{first_two}... {first_two}... {word}?"

#Example usage print(stutter("incredible")) print(stutter("enthusiastic")) print(stutter("outstanding"))

#Output #in... in... incredible? #en... en... enthusiastic? #ou... ou... outstanding?

Answer 2:

import math def radians_to_degrees(rad): return round(rad * 180/math.pi, 1)

#Example usage print(radians_to_degrees(1)) print(radians_to_degrees(20)) print(radians_to_degrees(50))

#Output #57.3 #1145.9 #2864.8

Answer 3:

def is_curzon(num): numerator = 2**num + 1 denominator = 2*num + 1 if numerator % denominator == 0: return True else: return False

#Example usage print(is_curzon(5)) print(is_curzon(10)) print(is_curzon(14))

#Output #True #False #True

Answer 4:

import math def area_of_hexagon(x): return round(3*math.sqrt(3)*x*x/2, 1)

#Example usage print(area_of_hexagon(1)) print(area_of_hexagon(2)) print(area_of_hexagon(3))

#Output #2.6 #10.4 #23.4

Answer 5:

def binary(decimal): binary_num = '' while decimal > 0: rem = decimal % 2 binary_num = str(rem) + binary_num decimal = decimal // 2 return binary_num

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#Example usage print(binary(1)) print(binary(5)) print(binary(10))

#Output #1 #101 #1010
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