#QUESTION1

import math

# Input degree value

degree = 15

# Convert degrees to radians

radian = degree \* (math.pi / 180)

# Print the result

print("Degree:", degree)

print("Radian:", radian)

#QUESTION2

# Input length of the base and height of the parallelogram

base\_length = 5

height = 6

# Calculate the area of the parallelogram

area = base\_length \* height

# Print the result

print("Length of base:", base\_length)

print("Height of parallelogram:", height)

print("Area is:", area)

#QUESTION3

def find\_smallest\_multiple(n):

    # Initialize the result as the first number (n)

    result = n

    factors = [n]

    # Find the least common multiple for numbers from n-1 to 1

    for i in range(n - 1, 1, -1):

        factors.append(i)

        result \*= i

    return factors, result

# Input value for n

n = 13

# Call the function to find the smallest multiple and factors

factors, smallest\_multiple = find\_smallest\_multiple(n)

# Print the factors and the smallest multiple

print(factors)

print(smallest\_multiple)

#QUESTION4

import numpy as np

# Create a NumPy array with mixed data types

array = np.array([1, 2.5, 3 + 4j, 5, 6.2, 7, 8 + 9j])

# Test if each element is complex

is\_complex = np.iscomplex(array)

# Test if each element is real

is\_real = np.isreal(array)

# Test if a given number is of a scalar type

number = 42

is\_scalar = np.isscalar(number)

# Print the results

print("Array:", array)

print("Is complex:", is\_complex)

print("Is real:", is\_real)

print("Is", number, "a scalar:", is\_scalar)

#QUESTION5

import numpy as np

# Create a NumPy array with the values 1, 7, 13, 105

array = np.array([1, 7, 13, 105])

# Get the size of the memory occupied by the array

size\_in\_bytes = array.nbytes

# Print the array and its memory size

print("Array:", array)

print("Size in bytes:", size\_in\_bytes, "bytes")