Example

Q1) Create a function (recursive functions) to find the factorial of an integer. A factorial is the product of all integers from 1 to the number itself.

Q2) Write a recursive function that prints the following shape:



Or

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Q3) Write a Python program that create a lambda function to adds 15 to a given number passed in as an argument,

Q4)Write a Python program that create a lambda function to subtract two numbers and print the result.

Q5: Write a Python program that create a lambda function for calculating the following equation:

Sphere volume (4/3 π r3)

Q1)

def factorial(x):
 if x == 1: # This is the base case
 return 1

 else: # This is the recursive case
 return(x \* factorial(x-1))

print(factorial(4))

Q2)

def pattern(num):
 if num ==0:
 return
 else:
 pattern(num-1)
 print('\* '\* num)

pattern(6)

Q3) Solution:

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| r = lambda a : a + 15print(r(10)) |

Q4)Solution:

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| r = lambda x, y : x – yx=float(input("Enter any numbers"))y= float(input("Enter any numbers"))print(r(x, y)) |

Q5) Solution:

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| Area=lambda radius: 4.0/3.0 \* 3.14 \* radius\* radius \* radiusr=float(input("Enter the radius of the sphere: "))print("The volume is: ",end='')print(Area(r)) |