def getSum(0):  
 if 0 != 0:  
 return n + getSum(n - 1)  
 else:  
 return 0

def getSum(1):  
 if 1 != 0:  
 return 1 + 0 = 1  
 else:  
 return n

def getSum(2):  
 if 2 != 0:  
 return 2 + 1 = 3  
 else:  
 return n

def getSum(3):  
 if 3 != 0:  
 return 3 + 3 = 6  
 else:  
 return n

def getSum(4):  
 if 4 != 0:  
 return 4 + 6 = 10  
 else:  
 return n

def getSum(5):  
 if 5 != 0:  
 return 5 + 10 = 15  
 else:  
 return n

**Head Recursion**

[3]

def fact(3):  
 if 3 == 1 or 3 == 0:  
 return 1  
 else:  
 return 3 \* 2 = 6

[2]

def fact(4):  
 if 4 == 1 or 4 == 0:  
 return 1  
 else:  
 return 4 \* 6 = 24

[1]

def fact(5):  
 if 5 == 1 or 5 == 0:  
 return 1  
 else:  
 return 5 \* 24 = 120

[5]

def fact(1):  
 if 1 == 1:  
 return 1  
 else:  
 return n \* fact(n - 1)

[4]

def fact(2):  
 if 2 == 1 or 2 == 0:  
 return 1  
 else:  
 return 2 \* 1 = 2

def sum\_tail\_recursive(0, sum=15):  
 if 0 == 0:  
 return 15  
  
 else:  
 return sum\_tail\_recursive(num - 1, sum + num)

def sum\_tail\_recursive(1, sum=14):  
 if 1 == 0:  
 return sum  
  
 else:  
 return sum\_tail\_recursive(1 - 1, 14 + 1)

def sum\_tail\_recursive(2, sum=12):  
 if 2 == 0:  
 return sum  
  
 else:  
 return sum\_tail\_recursive(2 - 1, 12 + 2)

def sum\_tail\_recursive(3, sum=9):  
 if 3 == 0:  
 return sum  
  
 else:  
 return sum\_tail\_recursive(3 - 1, 9 + 3)

def sum\_tail\_recursive(**4**, sum=5):  
 if 4 == 0:  
 return sum  
  
 else:  
 return sum\_tail\_recursive(4 - 1, 5 + 4)

def sum\_tail\_recursive(5, sum=0):  
 if 5 == 0:  
 return sum  
  
 else:  
 return sum\_tail\_recursive(**5 - 1**, **0 + 5**)