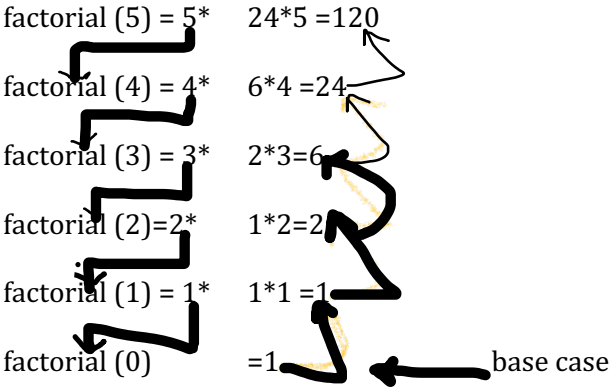
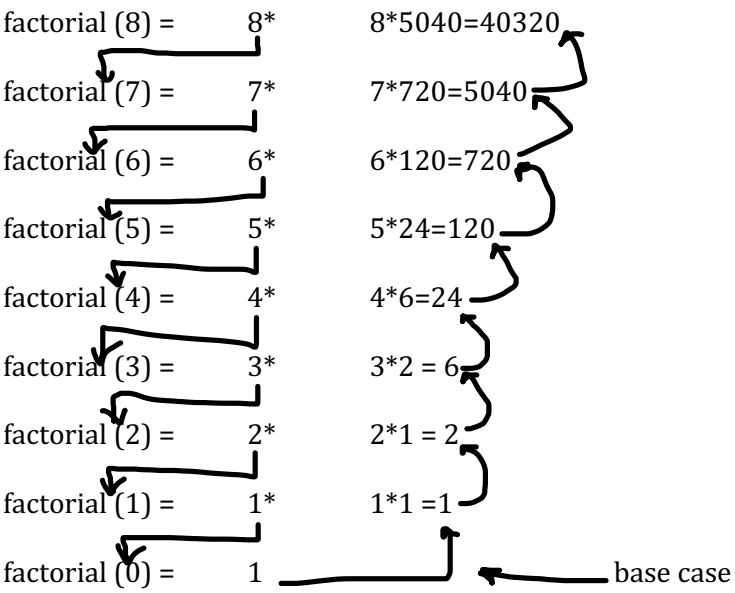
Name: Kokil Dhakal
Source: https://runestone.academy/ns/books/published/thinkcspy/IntroRecursion/toctree.html
Extension:No
Coloborator:No

1.**factorial (5)**



factorial (5) =120

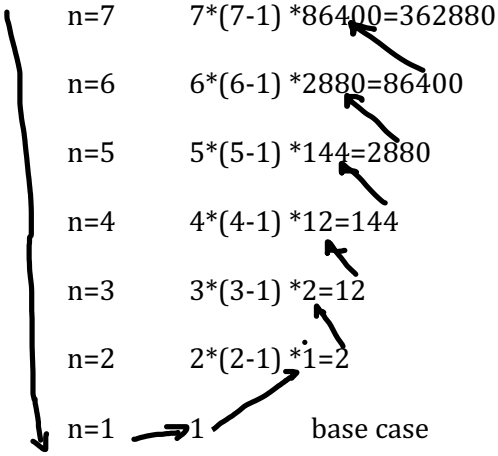
2.factorial (8)



factorial (8) = 40320

3.y(8)

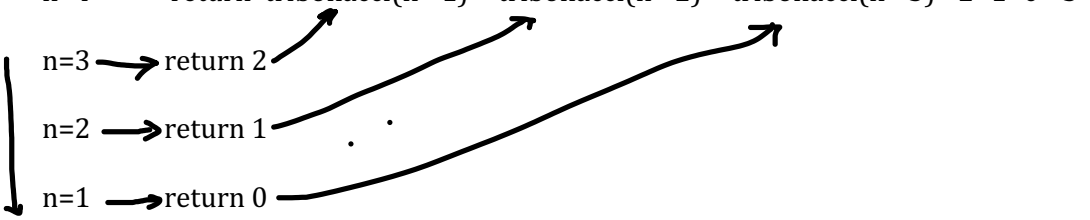
m=8
since 8! =1
now it is called by x(n)
n=x (8-1)=7



when x(n) complete, it produces n=3628800
now it comes back to function y(m) where it returns value of y (8) function as n which is 3628800

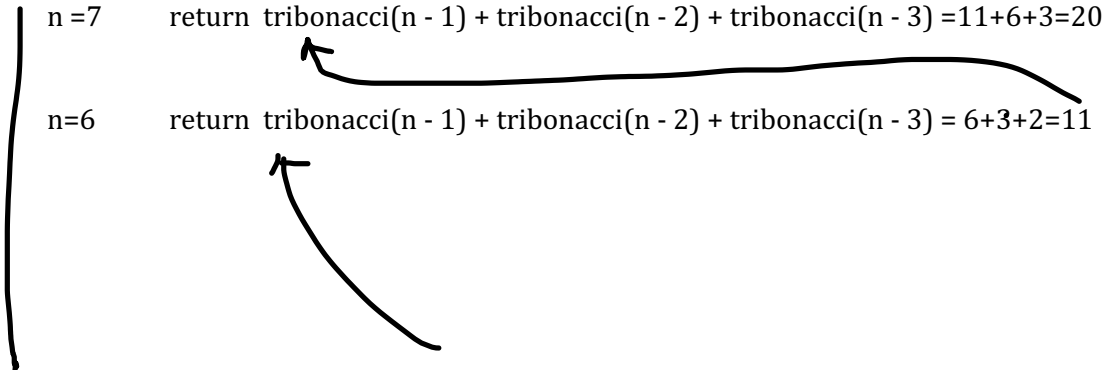
that is why value of function y(8)= 3628800

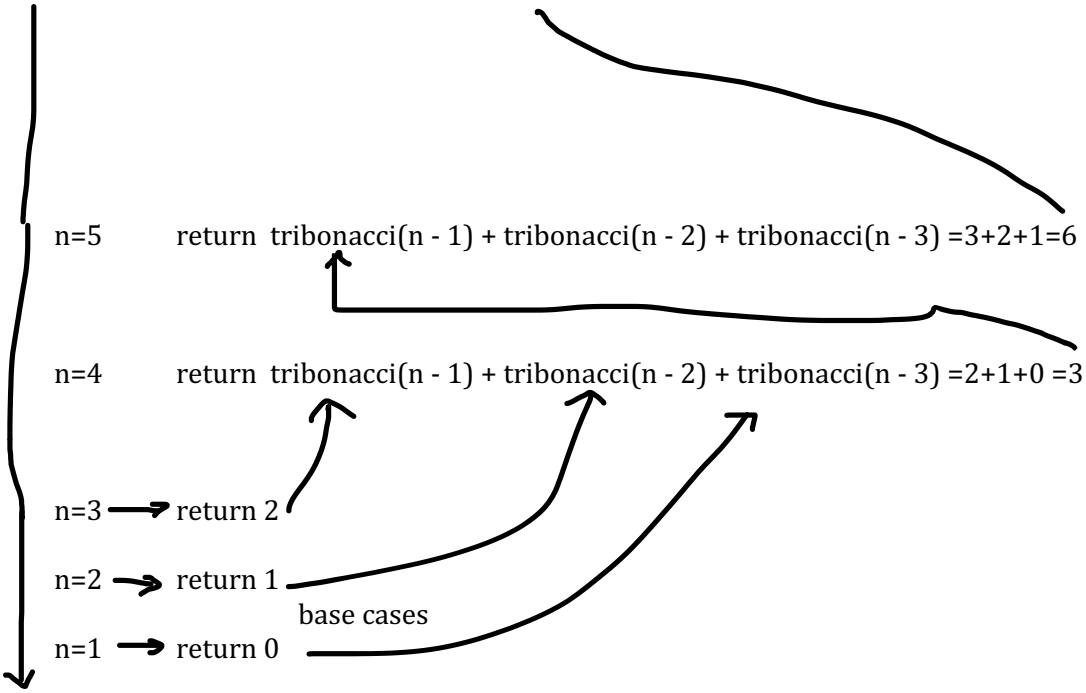
4.tribonacci (4)



Tribonacci (4) =3

4.tribonacci (7)





Tribonacci (7) =20 ·

Problems:2

list_1 = [10-thing for thing in range (20,1,-1)]

list of elements in range= [20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2]

when,

thing=20,	10-20=-10
thing=19,	10-19=-9
thing=18,	10-18=-8
thing=17,	10-17=-7
thing=16,	10-16=-6
thing=15,	10-15=-5
thing=14,	10-14=-4
thing=13,	10-13=-3
thing=12,	10-12=-2
thing=11,	10-11=-1
thing=10,	10-10=0
thing=9,	10-9=1
thing=8,	10-8=2
thing=7,	10-7=3
thing=6,	10-6=4
thing=5,	10-5=5
thing=4,	10-4=6
thing=3,	10-3=7
thing=2,	10-2=8

Answer,

list_1= [-10, -9, -8, -7, -6,-5,-4,-3,-2,-1,0,1,2,3,4,5,6,7,8]

list_2 = [val3 for val in [1,1,2,2,3,3,4,4] if val!=2]**

When,

val=1, satisfy condition val! =2,	1**3 = 1
val=1, satisfy condition val! =2,	1**3 = 1
val=2, does not satisfy condition! =2,	
val=2, does not satisfy condition! =2,	
val =3, satisfy condition val! =2,	3**3= 27
val =3, satisfy condition val!=2,	3**3= 27
val=4, satisfy condition val! =2,	4**3=64
val=4, satisfy condition val! =2,	4*3=64

answer,

list_2= [1,1,27,27,64,64]