The function sum\_positive\_numbers should return the sum of all positive numbers between the number n received and 1. For example, when n is 3 it should return 1+2+3=6, and when n is 5 it should return 1+2+3+4+5=15. Fill in the gaps to make this work:

def sum\_positive\_numbers(n):

    # The base case is n being smaller than 1

    if n < 1:

        return 0

    # The recursive case is adding this number to

    # the sum of the numbers smaller than this one.

    return n + sum\_positive\_numbers(n-1)

print(sum\_positive\_numbers(3)) # Should be 6

print(sum\_positive\_numbers(5)) # Should be 15

Here is your output:

6

15

Whoohoo! You've just written your first recursive function.

Well done!

Which of the following scenarios would benefit the most from using a recursive function to solve the problem?



You need to print out a list of the employees in your company.



You need to know how many files are present in a single directory of your computer.



You need to create a family tree, showing several generations of your ancestors, with all of their children.

**Correct**

Great job! You're getting the concept of recursion and when it's a better solution than the traditional looping techniques.

You need to create a family tree, showing several generations of your ancestors, with all of their children.

is selected.This is correct.

Great job! You're getting the concept of recursion and when it's a better solution than the traditional looping techniques.



You need to calculate the square root of numbers 1 through 10.

Additional Recursion Sources

Additional Recursion Sources

In the past videos, we visited the basic concepts of recursive functions.

A recursive function must include a recursive case and base case. The recursive case calls the function again, with a different value. The base case returns a value without calling the same function.

A recursive function will usually have this structure:

def recursive\_function(parameters):

    if base\_case\_condition(parameters):

        return base\_case\_value

    recursive\_function(modified\_parameters)

For more information on recursion, check out these resources:

* [Wikipedia Recursion page](https://en.wikipedia.org/wiki/Recursion)
* See what happens when you [Search Google for Recursion](https://www.google.com/search?q=recursion)