1. Create a function that takes a list and string. The function should remove the letters in the string from the list, and return the list.

**Examples**

remove\_letters(["s", "t", "r", "i", "n", "g", "w"], "string") ➞ ["w"]

remove\_letters(["b", "b", "l", "l", "g", "n", "o", "a", "w"], "balloon") ➞ ["b", "g", "w"]

remove\_letters(["d", "b", "t", "e", "a", "i"], "edabit") ➞ []

def remove\_letters(in\_list,str):

original=in\_list.copy()

for i in str:

if i in in\_list:

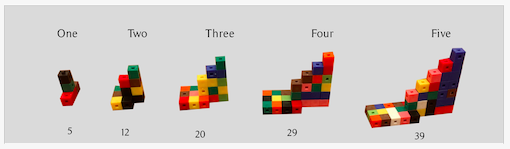
in\_list.pop(in\_list.index(i))

print(f"{original}--->{in\_list}")

remove\_letters(["b", "b", "l", "l", "g", "n", "o", "a", "w"], "balloon")

remove\_letters(["d", "b", "t", "e", "a", "i"], "edabit")

2. A block sequence in three dimensions. We can write a formula for this one:



Create a function that takes a number (step) as an argument and returns the amount of blocks in that step.

**Examples**

blocks(1) ➞ 5

blocks(5) ➞ 39

blocks(2) ➞ 12

def blocks(in\_num):

depth = in\_num\*3+((in\_num)-1)\*1

height = [x for x in range(2,in\_num+2)]

print (height)

print(f'blocks({in\_num}) ➞ {depth+sum(height)}')

3. Create a function that subtracts one positive integer from another, without using any arithmetic operators such as -, %, /, +, etc.

**Examples**

my\_sub(5, 9) ➞ 4

my\_sub(10, 30) ➞ 20

my\_sub(0, 0) ➞ 0

from operator import sub

def my\_sub(in\_one,in\_two):

output = sub(in\_one,in\_two) if in\_one >= in\_two else sub(in\_two,in\_one)

print(f'my\_sub{in\_one,in\_two} --> {output}')

my\_sub(5, 9)

4. Create a function that takes a string containing money in dollars and pounds sterling (seperated by comma) and returns the sum of dollar bills only, as an integer.

For the input string:

- Each amount is prefixed by the currency symbol: $ for dollars and £ for pounds.

- Thousands are represented by the suffix k.

i.e. $4k = $4,000 and £40k = £40,000

**Examples**

add\_bill("d20,p40,p60,d50") ➞ 20 + 50 = 70

add\_bill("p30,d20,p60,d150,p360") ➞ 20 + 150 = 170

add\_bill("p30,d2k,p60,d200,p360") ➞ 2 \* 1000 + 200 = 2200

def add\_bill(in\_string):

out=0

for ele in in\_string.split(","):

if "d" in ele:

if "k" in ele:

out += int(ele.replace("d","").replace("k",""))\*1000

else:

out += int(ele.replace("d",""))

print(out)

add\_bill("p30,d2k,p60,d200,p360")

5. Create a function that flips a horizontal list into a vertical list, and a vertical list into a horizontal list.

In other words, take an 1 x n list (1 row + n columns) and flip it into a n x 1 list (n rows and 1 column), and vice versa.

**Examples**

flip\_list([1, 2, 3, 4]) ➞ [[1], [2], [3], [4]]

# Take a horizontal list and flip it vertical.

flip\_list([[5], [6], [9]]) ➞ [5, 6, 9]

# Take a vertical list and flip it horizontal.

flip\_list([]) ➞ []

def flip\_list(in\_list):

if len(in\_list) > 0:

if isinstance(in\_list[0],list):

o=[ele[0] for ele in in\_list]

else:

o=[[ele] for ele in in\_list]

print(o)

else:

o=[]

print(o)