**Name:**

**Programming I**

**Lab Exercise 1.9.2024**

## The Fizz Buzz Test

Write a program that returns a list of all the numbers from 1 to an integer argument. But for multiples of three use “Fizz” instead of the number and for the multiples of five use “Buzz”. For numbers which are multiples of both three and five use “FizzBuzz”.

### Example

fizz\_buzz(10) ➞ [1, 2, "Fizz", 4, "Buzz", "Fizz", 7, 8, "Fizz", "Buzz"]

fizz\_buzz(15) ➞ [1, 2, "Fizz", 4, "Buzz", "Fizz", 7, 8, "Fizz", "Buzz", 11, "Fizz", 13, 14, "FizzBuzz"]

### Notes

Make sure to return a list.

1. **Wash Your Hands :)**

It takes **21 seconds** to wash your hands and help prevent the spread of COVID-19.

Create a function that takes the number of times a person washes their hands per day N and the number of months they follow this routine nM and calculates the duration in **minutes and seconds** that person spends washing their hands.

**Examples**

wash\_hands(8, 7) ➞ "588 minutes and 0 seconds"

wash\_hands(0, 0) ➞ "0 minutes and 0 seconds"

wash\_hands(7, 9) ➞ "661 minutes and 30 seconds"

**Notes**

* Consider a month has 30 days.
* Wash your hands.

## Last Digit Ultimate

Your job is to create a function, that takes 3 numbers: a, b, c and returns True if the last digit of a \* b = the last digit of c. Check the examples below for an explanation.

### Examples

last\_dig(25, 21, 125) ➞ True

# The last digit of 25 is 5, the last digit of 21 is 1, and the last

# digit of 125 is 5, and the last digit of 5\*1 = 5, which is equal

# to the last digit of 125(5).

last\_dig(55, 226, 5190) ➞ True

# The last digit of 55 is 5, the last digit of 226 is 6, and the last

# digit of 5190 is 0, and the last digit of 5\*6 = 30 is 0, which is

# equal to the last digit of 5190(0).

last\_dig(12, 215, 2142) ➞ False

# The last digit of 12 is 2, the last digit of 215 is 5, and the last

# digit of 2142 is 2, and the last digit of 2\*5 = 10 is 0, which is

# not equal to the last digit of 2142(2).

### Notes

Numbers can be negative.

## Expensive Orders

Write a function that has two parameters: orders and cost. Return any orders that are greater than the cost.

### Examples

expensive\_orders({ "a": 3000, "b": 200, "c": 1050 }, 1000)

➞ { "a": 3000, "c": 1050 }

expensive\_orders({ "Gucci Fur": 24600, "Teak Dining Table": 3200, "Louis Vutton Bag": 5550, "Dolce Gabana Heels": 4000 }, 20000)

➞ { "Gucci Fur": 24600 }

expensive\_orders({ "Deluxe Burger": 35, "Icecream Shake": 4, "Fries": 5 }, 40)

➞ {}

1. **Free Throw Probability**

What's the probability of someone making a certain amount of free throws in a row given their free throw success percentage? If Sally makes 50% of her free shot throws. Then Sally's probability of making 5 in a row would be 3%.

**Examples**

free\_throws("75%", 5) ➞ "24%"

free\_throws("25%", 3) ➞ "2%"

free\_throws("90%", 30) ➞ "4%"

**Notes**

* The success rate is a string.
* The function should return a string with the percent sign.
* Round your answer to the nearest whole number.