Project 2

CMPT220L
Due on Mar 25, 2022 by 11:59 PM
Points: 100

Problem Description

Given two integers I and J, I modulo J is the remainder when dividing I by J. For example, the numbers 7, 14, 27 and 38 become 1, 2, 0 and 2, modulo 3. Write a program that accepts 10 numbers as input and outputs the number of distinct numbers in the input, if the numbers are considered modulo 42.

Input

The input will contain 10 non-negative integers, each smaller than 1000, one per line.

Output

Output the number of distinct values when considered modulo 42 on a single line.

Explanation of Sample Inputs

In sample input 1, the numbers modulo 42 are 1,2,3,4,5,6,7,8,9 and 10.
In sample input 2, all numbers modulo 42 are 0.
In sample input 3, the numbers modulo 42 are 39,40,41,0,1,2,40,41,0 and 1. There are 6 distinct numbers.

Sample Input 1 **Sample Output 1**
1   10
2
3
4
5
6
7
8
9
10

Sample Input 2 **Sample Output 2**
42   1
84
252
420
840
126
42
84

```
420
126
```

Sample Input 3	Sample Output 3
39	6
40	
41	
42	
43	
44	
82	
83	
84	
85	

Deliverables

1. Create Java program called `Project2.java`.   **70 Points**

2. Comment your code.   **30 Points**

Submission

Submit the following items:

1. Compile, test, and submit your Java program to GitHub (you must submit the program regardless whether it's complete or incomplete, correct or incorrect)

Place your `Project2.java` file under the corresponding folder in your local copy of the GitHub repository, commit and push it to the remote repository. Make sure that the professor has access to the repository (`jfac65-marist`).

```
cmpt220lastname\
  prj\
    2\
      Project2.java
```