Question 1:

Today you are commissioned to write a Java program that will prompt for and read 3 2-digit integers (named n1, n2 and n3 in this document) entered by the user, and based on their sum will generate a magic number. Be sure to usethe same format and wording as in the sample runs in the table below.

Using nested ifs generate and display the magic number based on the following criteria.
If the sum of the 3 integers entered is:

1. A multiple of 3 but not a multiple of 5 then the magic number is made up of the 1st digit of n2 followed by the sum of n1 and n3.
2. Not a multiple of 3 but a multiple of 5 then the magic number is made up of the sum of n1 and n3 followed by the last digit of n2.
3. A multiple of 3 and a multiple of 5 then the magic number is n2 followed by n1 followed by the digit 1.
4. None of the above conditions then the magic number is n1 followed by n2 followed by n3.

The box below illustrates how your program should behave and appear.
REMEMBER in the output: ◦ is a space and ↵ is a new line. Text in **green** is user input

Enter◦3◦2-digit◦numbers:↵ 10◦11◦12↵ ↵ Your◦magic◦number◦is◦122	Enter◦3◦2-digit◦numbers:↵ 20◦25◦45↵ ↵ Your◦magic◦number◦is◦25201
Enter◦3◦2-digit◦numbers:↵ 10◦12◦18↵ ↵ Your◦magic◦number◦is◦282	Enter◦3◦2-digit◦numbers:↵ 11◦20◦45↵ ↵ Your◦magic◦number◦is◦112045

Note 1: You are to expect a perfect user who will always enter 3 2-digit integers; that is, **do not** verify the validity of user input.

Note 2: The use of libraries other than *java.util.Scanner* is prohibited. Your program must work for any 3 2-digit integers entered, not just the ones in the samples above.

Note 3: Final thought, remember that your solution is case-sensitive and space-sensitive and fulfill the above instructions carefully and precisely.

Question 2:

You are commissioned to write a Java program that will asking from user integer number and call it joker, Then ask from user how many number he/she wants to put .
After getting all the number output will be as follow,
If the number is less than joker give the zero otherwise deduct that number until getting number less than joker and keep that number.

The box below illustrates how your program should behave and appear.
REMEMBER in the output: ◦ is a space and ↵ is a new line. Text in **green** is user input

Input :

Joker: 5 Number : 7 Enter◦numbers:↵ 10◦23◦12◦11◦1◦4◦7↵ ↵ 0◦3◦2◦1◦1◦4◦2	Joker: 11 Number : 7 Enter◦numbers:↵ 10◦23◦12◦11◦1◦4◦7↵ ↵ 10◦1◦1◦0◦1◦4◦7

Question 3:

You are commissioned to write a Java program that will asking from user 2 integer. Call them row and col. Create the multidimensional array by that sizes.

Fill the array with the random number between 1 to 100. And print it.
Now ask user which number want to disappear. Get the value and search for entire the matrix ; find the number and make it to zero and return the new array.

Question 4:

Write the method to get the array and sort it. (Don't use any library).

Question 5:

Given an array `nums` of size `n`, return *the majority element*.

The majority element is the element that appears more than `⌊n / 2⌋` times. You may assume that the majority element always exists in the array.

Example 1:

```
Input: nums = [3,2,3]
Output: 3
```

Example 2:

```
Input: nums = [2,2,1,1,1,2,2]
Output: 2
```

Question 6:

Given an array `nums` containing `n` distinct numbers in the range `[0, n]`, return *the only number in the range that is missing from the array.*

Example 1:

```
Input: nums = [3,0,1]
Output: 2
Explanation: n = 3 since there are 3 numbers, so all numbers are in the range [0,3]. 2 is the missing number in the range since it does not appear in nums.
```

Example 2:

```
Input: nums = [0,1]
Output: 2
Explanation: n = 2 since there are 2 numbers, so all numbers are in the range [0,2]. 2 is the missing number in the range since it does not appear in nums.
```

Example 3:

```
Input: nums = [9,6,4,2,3,5,7,0,1]
Output: 8
Explanation: n = 9 since there are 9 numbers, so all numbers are in the range [0,9]. 8 is the missing number in the range since it does not appear in nums.
```