# A test of "programming for beginners" – 7 may 2017

## Task 6 . Numbers generator

To write a program that reads from the console **three integers**– **M, N and L ,**and **generate all the numbers in the range from MNL to 111**. From the console read **a special** and **a check digit**. **For each combination**of three numbers **is**:

1. **If it is divisible by 3 with no residue – to the special number add 5**;

2. **If the ends of 5 – by the special number 2 come out**;

3. **If it is an even number – the special number is multiplied by 2**.

It should be borne in mind, one number **can respond to more than one check**. In such a case should be regarded **of priority operations**. **If the First is a multiple of 3, then whether the ends of 5 and finally whether it is an even number**. For example:

**972 is divisible by 3, and is even**in such a case, perform the operation only with the highest priority and **to the special number add 5, but we multiply it by 2 then**.

**315 is divisible by 3 and ends on 5. To the special number add 5.**

**In case you do not meet any of the above checks are not performed, and the program continues**. **If the special number becomes equal to or greater than the control program ends**.

### Login

From the console are read **5 numbers**, each **on a separate line**:

1. **(M)**– **an integer in the range** **[1 ... 9]**;

2. **N**– **an integer in the range [1 ... 9]**;

3. **L**– **General number in the range [1 ... 9]**;

4. **Special number**– **an integer in the range** **[0 ... 100]**;

5. **Check digit**– **an integer in the range** **[0 ... 1000]**;

### Exit

The printing on the console depends on the result:

        **If the reference number is reached**print **1 line**:

o **"Yes! Control number was reached! Current special is number {special number}**. **"**

        **If the reference number is not reached**prints **1 line**:

o **"No! {special number} is the last special reached number. "**

### Sample input and output

|  |  |  |
| --- | --- | --- |
| **Login** | **Exit** | **Explanations** |
| 9  7  3  2  44 | Yes! Control number was reached! Current special number is 48. | 973 – is not divisible by 3 does not end at 5 and is not even => on it are not carried out any operations. the special number is less than the control, and the program continues.  972 - divisible by 3 => 2 + 5 = 7. The special number is less than the control, and the program continues.  971 – does not meet the conditions and does not carry out operations  963 - cubed 3 => 7 + 5 = 12  962 - Chou => 12 \* 2 = 24  961 -does not comply with the conditions and does not carry out operations  ...  952 - Chou => 24 \* 2 = 48  48 >= 44 |
| **Login** | **Exit** | **Explanations** |
| 1  1  7  1  308 | No! 35 is the last reached special number. | 117 - cubed 3 => 1 + 5 = 6  116 - Chou => 6 \* 2 = 12  115 - ends on 5 => 12 – 2 = 10  114 - cubed 3 => 10 + 5 = 15  113 - does not meet either test and the program continues  112 - Chou => 15 \* 2 = 30  111 - cubed 3 => 30 + 5 = 35  35 < 308 |