# A test of "programming for beginners"- 25 June 2017

## Task 6 . The sum or product

From the console reads **an integer – control**must be printed in a particular format **all the triples (a, b and c) in the range of 1 to 30 including, the sum or product is equal to the reference number.**Having complied with the following conditions:

        **finding the sum: a b c < <**

        **find a product: a > b > c.**

**In case you haven't found such numbers must print a No**.

For example, **in the control number 18:**

**print**

        1 + 2 + 15 = 18 **(a < b < c)**

        **...**

        6 \* 3 \* 1 = 18 **( a > b > c )**

        **...**

**NOT print**

        1 + 1 + 16 = 18; 1 + 10 + 7 = 18 because the condition is not met **(a < b < c) ;**

        1 \* 2 \* 9 = 18; 2 \* 1 \* 9 = 18 because the condition is not met **(a > b > c).**

### Login

From the console is Chet e **1 whole number**: **N**– **an integer in the range [1 ... 300 00]**;

### Exit

The printing on the console depends on the result:

        **If threes found numbers (a < b < c), the sum of which equals the control number otpečatvame**:

o **"{a} + {b} + {c} = {N}"**

        **If threes found numbers (a > b > c) the work, which is equal to the reference number otpečatvame**:

o **"{a} \* {b} \* {c} = {N}"**

        **If you have not found such numbers print**:

o **"No!"**

**All combinations printed in ascending order.**

### Sample input and output

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Login** | **Exit** | **Explanations** | | | |
| 12 | 1 + 2 + 9 = 12  1 + 3 + 8 = 12  1 + 4 + 7 = 12  1 + 5 + 6 = 12  2 + 3 + 7 = 12  2 + 4 + 6 = 12  3 + 4 + 5 = 12  4 \* 3 \* 1 = 12  6 \* 2 \* 1 = 12 | Start checking the numbers consistently:  {1 } {1} {1}; {1} {1} {2}; {1} {1} {3}; ... **{1} {1} {10} - > 12** (**the sum is equal to the reference number**, but **the condition is not met a < b < c and NOT otpečatvame**); ... **{1} {1} {12} -> 12**(**the piece is equal to 12, but has not met the condition a > b > c and NOT otpečatvame**); ... **{1} {2} {6} -> 12**(**the piece is 12, three numbers are different, but the condition is not met a > b > c and print);**  **{ 1} {2} {9} -> 12**(**the total is 12**, three different numbers, the met provided **a < b < c and print);** ... **{3} {4} {1}-> 12 (the piece is 12, the condition is satisfied and print). {10} {1} {1}-> 12 (the total is 12, but the condition is not met a < b < c, the program continues);** | | | |
| **Login** | **Exit** | **Login** | **Exit** | **Login** | **Exit** |
| 100 | 10 \* 5 \* 2 = 100  20 \* 5 \* 1 = 100  25 \* 4 \* 1 = 100 | 93 | No! | 75 | 15 \* 5 \* 1 = 75  16 + 29 + 30 = 75  17 + 28 + 30 = 75  18 + 27 + 30 = 75  18 + 28 + 29 = 75  19 + 26 + 30 = 75  19 + 27 + 29 = 75  20 + 25 + 30 = 75  20 + 26 + 29 = 75  20 + 27 + 28 = 75  21 + 24 + 30 = 75  21 + 25 + 29 = 75  21 + 26 + 28 = 75  22 + 23 + 30 = 75  22 + 24 + 29 = 75  22 + 25 + 28 = 75  22 + 26 + 27 = 75  23 + 24 + 28 = 75  23 + 25 + 27 = 75  24 + 25 + 26 = 75  25 \* 3 \* 1 = 75 |