# A test of "fundamentals of programming" 18 March 2017

## Task 4. Game on intervals

Write a program , to **calculate the** **the result of the game**first receive **a number**that **indicates how much the course will continue the game**then **for each turn of the game** will receive **a new number**. **According to the interval** in which falls the number **attribute points**. If the number is **negative or greater than 50**, then it **is invalid**. **At the beginning of the game the score is 0** and **every move points are added** as follows:

        **From 0 to 9** **20% by number**

        **From 10 to 19** **30% of the number**

        **From 20 to 29** **40% of the number**

        **From 30 to 39** **50 points**

        **From 40 to 50** **100 points**

        **Invalid number**  **the result is divisible by 2**

In addition to the results the program **has to make statistics for percentages given numbers in intervals**.

### Login

The input is read from the console:

        **First line** how the course will have during the game – **an integer in** **the range [1 .. 100]**

        **For each move**– the numbers are verified in any space – are **integers in the range** **[-100...100]**

### Exit

To be printed on the console **line 7:**

        **1st row: "{Result}"**

        **2nd row: "From 0 to 9: {a percentage in the range}%"**

        **3rd row: From 10 to 19: {a percentage in the range}% "**

        **4th row: "From 20 to 29: {a percentage in the range}%"**

        **5th row: From 30 to 39: {a percentage in the range}% "**

        **6th row: From 40 to 50: {a percentage in the range}% "**

        **7th row: "Invalid numbers: {a percentage in the range}%"**

**All the numbers**must be **formatted to the second character after the comma.**

### Sample input and output

|  |  |  |
| --- | --- | --- |
| **Login** | **Exit** | **Explanations** |
| 10  43  57  -12  23  12  0  50  40  30  20 | 295.80  From 0 to 9: 10.00%  From 10 to 19: 10.00%  From 20 to 29: 20.00%  From 30 to 39: 10.00%  From 40 to 50: 30.00%  Invalid numbers: 20.00% | **10 moves**; **Initial result** = **0 points**  **1st move**: 40 <= 43 <= 50  **Add to the score 100 points**  **2nd course**: 57 > 50  **invalid number** **100/2 = 50 points**  **3rd course**:-12 < 0  **invalid number**  **50/2 = 25 points**  **4th course**: 20 <= 23 <= 29  **to the score add 40% of 23**= 25 + 9.2 = 34.2 and so to the fair's 10th move. ...    **From 0 to 9**: 1 number (0) = **10%**  **From 10 to 19**: 1 number (10) = **10%**  **From 20 to 29**: 2 numbers (20 and 23) = **20%**  **From 30 to 39**1st day: (30) = **10%**  **From 40 to 50**: 3 numbers (40, 43 and 50) = **30%**  **Invalid**: 2 numbers (57-12) = **20%** |