

1. Enter 3 numbers. Find the biggest number.

2. Enter coordinates of two points:  $A(x_1, y_1)$  and  $B(x_2, y_2)$ .

Find the distance between two points.

3. Some schools start at 9:00. The duration of the lesson is 45 minutes, after the 1st, 3rd, 5th, etc.

lessons break is 5 minutes,  
and after the 2nd, 4th, 6th,  
etc. - 15 minutes.

The lesson number is given  
(a number from 1 to 10).  
Determine when the  
specified lesson ends.

Print two integers: the end  
time of the lesson in hours  
and minutes.

4. A pie in the cafeteria  
costs ***a*** RMB and ***b*** feng.

Determine how many yuans and fengs you need to pay for  $n$  pies. The program receives three numbers as input:  $a$ ,  $b$ ,  $n$ , and must output two numbers: the purchase price in yuans and fengs.

5. A snail crawls along a vertical pole  $h$  meters high, ascending  $a$  meters during the day and descending  $b$  meters during the night. On

what day will the snail crawl to the top of the pole?

The program receives natural numbers  $h, a, b$  as input.

The program should output one natural number. It is guaranteed that  $a > b$ .

6. Given two integers  $A$  and  $B$ ,  $A > B$ . Print all odd numbers from  $A$  to  $B$  inclusive, in descending

order. In this task, you can do without the if statement.

7. The factorial of a number  $n$  is the product  $1 \times 2 \times \dots \times n$ . Designation:  $n!$ . Given a natural number  $n$ , calculate the value of  $n!$ . It is forbidden to use the mathematical library `math` in this problem.

8. Given a natural number  $N$ , find the largest integer power of two not exceeding

N. Print the exponent and the power itself. Use loop.

9. On the first day, the athlete ran  $x$  kilometers, and then every day he increased the distance by 10% from the previous value. Given the number  $y$ , determine the number of the day on which the athlete's run will be at least  $y$  kilometers.

The program receives real numbers  $x$  and  $y$  as input

and must output one natural number.

10. The sequence consists of natural numbers and ends with the number 0. Determine how many elements of this sequence are equal to its largest element.