# "Programming Basics" Exam

## 2. Skeleton

The skeleton athlete Malcolm Davidson is fighting for an Olympic quota. You have the honor of writing the program that will calculate whether he earns a quota.

The program receives the control in **minutes** that must be reached or improved in order for Malcolm to make the quota. Also, the program will get the distance of the chute **in meters**, and the time **in seconds** for it to travel **100 meters**.

It should be kept in mind that due to the slope of the chute, **his time is decreased by 2.5 seconds every 120 meters**.

### Input

Read **4 lines** from the console:

**Line 1. Control minutes – an integer in the range [0…59]**

**Line 2. Seconds for control – an integer in the range [0…59]**

**Line 3. The length of the chute in meters – a floating-point number in the range [0.00…50000]**

**Line 4. Seconds for 100 meters– an integer in the range [0…1000]**

### Output

Print **one or two** lines to the console:

* If Malcolm’s time is **less or equal to the control**:
  + "Malcolm Davidson won an Olympic quota!"
  + "His time is {Malcolm’s time in seconds}."
* If Malcolm’s time is **more than the control**:
  + "No, Malcolm failed! He was {needed seconds} second slower."

The result must be formatted to the third digit after the decimal point.

### Sample Input and Output

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 2  12  1200  10 | Malcolm Davidson won an Olympic quota!  His time is 95.000. | **Calculating the control in seconds:** 2 \* 60 + 12 => 132 seconds  **Calculating how many times the time will decrease:** 1200 / 120 = 10  **Total decreased time:** 10 \* 2.5 = 25 seconds  **Malcolm’s time:** (1200 / 100) \* 10 – 25 = 95 seconds  **Control time:** 132 sec., Malcolm’s time -95 seconds.  95 <= 132 -> Malcolm gets the quota. |
| **Input** | **Output** | **Comments** |
| 1  20  1546  12 | No, Malcolm failed! He was 73.312 second slower. | **Calculating the control in seconds:** 1 \* 60 + 20 => 80 seconds  **Calculating how many times the time will lower:** 1546 / 120 = 12.883..  **Total lowered time:** 12.883.. \* 2.5 = 32.208.. seconds  **Malcolm’s time:** (1546 / 100) \* 12 – 32.208... = 153.311.. seconds  **Control time:** 80 seconds  153.312 > 80 -> Malcolm doesn’t get the quota.  153.312 - 80 = 73.312 seconds remain |