

## Problem E

### Martian Programmer

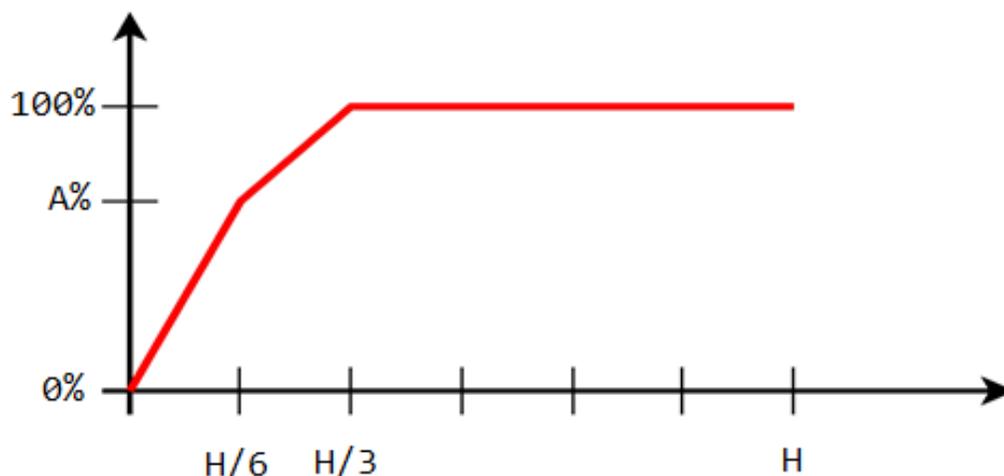
Time Limit: 1 second

Mem limit: 512 Megabytes

Mr. Phidang is an insane programmer coming from Mars, where there are exactly  $H$  hours a day. He has just read a scientific paper “Relatives between work and sleep”. According to this research, all the time that you are not working, you are sleeping. Additionally, the research states and proves the following results:

1. If a person sleep 0 hours a day, then his performance will be 0%
2. If a person sleep  $H/3$  hours a day, then his performance will be 100%
3. If a person sleep  $H/6$  hours a day, then his performance will be  $A\%$
4. In case a person sleep from  $H/6$  to  $H/3$  hours a day, his performance increases linearly from  $A\%$  to 100%
5. In case a person sleep from  $H/6$  to 0 hours a day, his performance decreases linearly from  $A\%$  to 0%

Mr. Phidang visualizes the information by drawing the following graph.



Mr. Phidang believes that the amount of programming work he do each day is equal to the product of his working time and his performance. Thus, the problem is that if he sleeps more, he works less, and if he sleep less, he has less performance.

Mr. Phidang wants to get back to programming as soon as possible. Please help him determine the maximum daily amount of work that he can do with the optimal choice of sleep time.

## Input

The input contains two integers  $A$  and  $H$  – the performance as a percentage if the sleep time is  $H/6$ , and the number of hours per day on Mars ( $0 \leq A \leq 100, 1 \leq H \leq 10^5$ ).

## Output

The output should contains a single real number – the maximum daily amount of work that can be done by Mr. Phidang. The relative error does not exceed  $10^{-6}$ .

## Sample Input

## Sample Output

75 24	1600.00000000
100 24	2000.00000000
77 123	8214.26086957