



STUDENT REPORT

DETAILS

Name

RIDA ARSHAD

Roll Number

3BR23CD076

EXPERIMENT

Title

DIWALI CONTEST

Description

Max is planning to take part in a Diwali contest at a Diwali Party that will begin at 8 PM and will run until midnight (12 AM) i.e., for 4 hours. He also needs to travel to the party venue within this time which takes him **P** minutes. The contest comprises of **N** problems that are arranged in order of difficulty, with problem 1 being the simplest and problem N being the most difficult. Max is aware that he will require $5*i$ minutes to solve the i^{th} problem.

Your task is help Max find and return an integer value, representing the number of problems Max can solve and reach the party venue within the given time frame of 4 hours.

Note: Max will leave his home at exactly 8 PM to reach the party venue.

Input Format:

input1: An integer value N, representing the total number of problems.

input2: An integer value P, Representing the time to travel in minutes from his home to the party venue.

Example:

Input:

6

180

Output:

4

Explanation:

The amount of time left to solve the problems is $4*60-180=60$ mins.

1st Problem - 5 mins, Time left = $60-5=55$ mins

2nd Problem - 10 mins, Time left = $55-10=45$ mins

3rd Problem - 15 mins, Time left = $45-15=30$ mins

4th Problem - 20 mins, Time left = $30-20=10$ mins

5th Problem - 25 mins

So he can solve only 4 problems as he is not left with 25 mins to complete 5th problem.

Source Code:

```
def maximum_solved(N, P):  
    time = 240 - P  
    time_spent = 0  
    problems_solved = 0  
    for i in range(1, N+1):  
        problem_time = 5 * i  
        if time_spent + problem_time <= time:  
            time_spent += problem_time  
            problems_solved += 1  
        else:  
            break  
    return problems_solved  
  
N = int(input())  
P = int(input())  
print( maximum_solved(N, P))
```

RESULT

5 / 5 Test Cases Passed | 100 %