Logo

STUDENT REPORT

DETAILS

Name

V OMKAR

Roll Number

TEMPBTech-CSE025

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 max_problems_solved(N, P):
    # Total available time for solving problems (240 minutes minus travel time)
    remaining_time = 240 - P

    # Initialize counters for time and problems solved
    time_spent = 0
    count = 0

    # Iterate over problems from 1 to N
    for i in range(1, N + 1):
        # Time to solve the ith problem
        time_to_solve = 5 * i

        # Check if there's enough time left to solve this problem
        if time_spent + time_to_solve > remaining_time:
            break  # Max can't solve more problems

        # Update the time spent and count of problems solved
        time_spent += time_to_solve
        count += 1

    return count
N=int(input())
P=int(input())
result=max_problems_solved(N,P)
print(result)
```

RESULT

5 / 5 Test Cases Passed | 100 %