✏️ Practice Arena

Practice problems aimed to improve your coding skills.

📂 PRACTICE-02_SCAN-PRINT
📂 PRACTICE-03_TYPES
📂 LAB-PRAC-02_SCAN-PRINT
- ❷ Mr C goes on a diet
- ❷ Permute Password
- ❷ Escapes around Tutors
- ❷ Amusing Fractions
- ❷ P and C
- ❷ Build a Rhombus
- ❷ Developing Interest at IITK
- ❷ Pick your Choice
- ❷ Lego Safe
- ❷ Race Car
- ❷ Reverse Gear
- ❷ Numerical Flowers

📂 LAB-PRAC-01
📂 PRACTICE-04_COND
📂 BONUS-PRAC-02
📂 LAB-PRAC-03_TYPES
📂 PRACTICE-05_COND-LOOPS
📂 LAB-PRAC-04_COND
📂 LAB-PRAC-05_CONDLOOPS
📂 PRACTICE-07_LOOPS-ARR
📂 LAB-PRAC-06_LOOPS
📂 LAB-PRAC-07_LOOPS-ARR
📂 LABEXAM-PRAC-01_MIDSEM
📂 PRACTICE-09_PTR-MAT
📂 LAB-PRAC-08_ARR-STR
📂 PRACTICE-10_MAT-FUN
📂 LAB-PRAC-09_PTR-MAT
📂 LAB-PRAC-10_MAT-FUN
📂 PRACTICE-11_FUN-PTR
📂 LAB-PRAC-11_FUN-PTR
📂 LAB-PRAC-12_FUN-STRUC
📂 LABEXAM-PRAC-02_ENDSEM
📂 LAB-PRAC-13_STRUC-NUM
📂 LAB-PRAC-14_SORT-MISC

Race Car

LAB-PRAC-02_SCAN-PRINT

Race Car [20 marks]

Problem Statement
Let us recall the equations of motion. If u is initial velocity, a is acceleration, t is time spent, s is displacement, and v is final velocity, then we have

1. v = u + a * t
2. s = u*t + 1/2*a*t*t
3. v*v = u*u + 2*a*s

Your car is driving at current speed u m/sec. You decide to accelerate at a m/sec for t seconds. Your job is to output your velocity at the end of t seconds as well as your displacement in these t seconds. If he velocity or displacement answers are not integers, output just the integer part of the answer. For example, if your velocity is 78.23 m/sec, you should output 78. Similarly, if your displacement is 114.79 m, you should output 114. Print both outputs on different lines.

Caution

1. Do not use math.h or any header file other than stdio.h
2. Use only integer variables. No floats, doubles etc.
3. Do not use loops or conditional statements.
4. Be careful about missing/extra spaces and missing/extra lines.

HINTS:

1. Visible test case number 1 is there to confirm if you are giving output in the correct format or not. Be careful about extra spaces and lines.
2. Visible test case number 2 is there to check if you are performing integer arithmetic operations properly or not.

INPUT:
u a t
OUTPUT:
velocity after t seconds
displacement during these t seconds

EXAMPLE:
INPUT
1 1 1
OUTPUT:
2
1

Grading Scheme:
Total marks: **[20 Points]**

There will be partial grading in this question. In each test case, 50% marks are for giving the correct velocity and 50% marks will be for giving the correct displacement i.e. if a test case is worth 2 points, 1 point is for correct velocity and 1 point for correct displacement.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible test cases and 4 hidden test cases.

🍴 Start Solving! (/editor/practice/5958)