# A test of "fundamentals of programming" 18 December 2016

## Task 1. Distance

Write a program to calculate **how many miles you drive a car**, for which **we know the initial speed (km/h)**, **the time in minutes** **after which the speed increases by 10%**, **the second time after which reduces speed by 5%** and **the time until the end** of the trip. To find the distance you have to **turn** **the minutes to hours** **(70 min = 1.1666 hours).**

### Login

From the console read **4 rows**:

**Row 1.** **The initial speed in km/h**– **an integer** in the range **[1 ... 300]**

**Row 2.** **First time in minutes**– **an integer** in the range **[1...1000]**

**Line 3.** **Second time in minutes**– **an integer** in the range **[1...1000]**

**Line 4.** **Third time in minutes**– **an integer** in the range **[1...1000]**

### Exit

To print to the console **a number**:**mileage**. **Formatted to the second decimal place.**

### Sample input and output

|  |  |  |
| --- | --- | --- |
| **Login** | **Exit** | **Explanations** |
| 90  60  70  80 | 330.90 | **Distance was origina. speed**– 90 km/h \* 1 hour (60 minutes) = **90 km**  **After the increase**– 90 + 10% = 99.00 km/h \* 1.166 hours (70 min) = **115.50 km**  **After the reduction**-99-5% = 94.05 km/h \* 1.33 hours (80min) = **125.4 km**  **Total driven**– **330.9 km** |
| **Login** | **Exit** | **Explanations** |
| 140  112  75  190 | 917.12 | **Distance was origina. speed**– 140 km/h \* 1.86 hours (112min) = **261.33 km**  **After the increase**– 140 + 10% = 154. 00 km/h \* 1. 25 (7 hours5 min) = **1** **92 5 km**  **After the reduction**– 154 .00 - 5% = 146.29 km/h \* 3 . 16 hours (190min) = **463.28 km**  **Total driven**– **917.1166 km** |