PROBLEMS:

P11. F2C Conversion

Write a program that takes as input Fahrenheit temperature. It converts the input temperature to Celsius and prints out the converted temperature as shown in the example. The formula for conversion between the two is: C=5/9(F−32), Where C is the temperature in Celsius and F is the temperature in Fahrenheit.

Note: round your answer to up to two decimal places.

EXAMPLES:

INPUT: 212 OUTPUT: Fahrenheit temperature 212.0 is the same as 100.0 degrees Celsius.	INPUT: 0.555 OUTPUT: Fahrenheit temperature 0.555 is the same as -17.47 degrees Celsius.

P12. Final Velocity

Write a program that takes as input three numbers, u, a, and t. Here u stands for the initial velocity, a stands for the acceleration, and t stands for the time duration. The program prints the final velocity (v). v=u+at

Recall that u and a can take any real (float) values as velocity and acceleration are continuous vector quantities (in physics). Time t can take non-negative real values only, i.e., 0 ≤ t.

Note: round your answer to up to two decimal places.

EXAMPLE:

INPUT: 20.0 15 2 OUTPUT: The final velocity is 50.0.

P13. Displacement Covered

Write a program that takes as input three numbers, u, a, and t. Here u stands for the initial velocity, a stands for the acceleration, and t stands for the time duration. The program prints the displacement covered (d) in time t.

Recall that u and a can take any real value as velocity and acceleration are continuous vectors (in physics). Time t can take non-negative real values only, i.e., 0 ≤ t.

NOTE: round your answer to up to two decimal places.

1. The formula for computing the displacement: $d=ut + \frac{1}{2}at^2$

EXAMPLE:

INPUT: 20 15 2 OUTPUT: The displacement is 70.0.

P14. Number of Days

Write a program that takes as input an Integer s, the number of seconds elapsed for a certain event. The program converts s to hours (hh), minutes (mm), and seconds (ss) and prints the output as hh:mm:ss.

EXAMPLES:

INPUT: 5 OUTPUT: 0:0:5	INPUT: 67 OUTPUT: 0:1:7	INPUT: 3692 OUTPUT: 1:1:32

Note that the input will only be positive integer values since time cannot be negative.