

Beginner Problems

Problem 1: Unit Conversion

10 minutes, 100 points

Filename: prob01 (e.g. *prob01.c*, *prob01.cpp*, *prob01.java*, *prob01.py2*, *prob01.py3*)

Description

We need to calculate the weight of items to be shipped in kilograms (KG). One kilogram (KG) equals 2.2 pounds (LB).

The first line of input will include a single integer that indicates how many additional lines of input need to be read. Each additional line of input will contain number of gallons (GAL) and weight of liquid in pounds per gallon (LB/GAL).

Multiply the number of gallons (GAL) times the weight of the liquid (LB/GAL) to determine total weight in pounds (LB). Then convert the total weight from pounds (LB) to kilograms (KG) by dividing pounds (LB) by 2.2.

$$\text{GAL} \times \text{LB/GAL} = \text{LB}, \text{ then } \text{LB} / 2.2 = \text{KG}$$

Example:

$$144 \text{ gal} \times 8.34 \text{ LB/gal} = 1200.96 \text{ gal}, \text{ then } 1200.96 \text{ LB} / 2.2 \text{ KG/LB} = 545.89 \text{ KG}$$

Output the weight in Kilograms (KG) for each shipment. Round your result to the nearest hundredth of a kilogram (two decimal places). Always display two decimal places (e.g. $432.1 = 432.10$).

Sample Input

```
3
144 8.34
288 7.6
250 7.344
```

Sample Output

```
545.89
994.91
834.55
```

Learn More

Liquid density varies by type of liquid. Water weighs 8.34 pounds per gallon, while olive oil only weighs 7.6 pounds per gallon, and petroleum oil weighs even less at 7.344 pounds per gallon.