

Problem 3: Equation

10 minutes, 100 points

Filename: prob03 (e.g. *prob03.c*, *prob03.cpp*, *prob03.java*, *prob03.py2*, *prob03.py3*)

Description

We need to convert a weather forecast from Celsius (C) and KM/H to Fahrenheit (F) and MPH.

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 the daily high temperature in Celsius (C), daily low temperature in Celsius (C), and wind speed in Kilometers/Hour (KM/H).

Use these formulas to convert temperatures and wind speeds:

Celsius to Fahrenheit: $C \times 9/5 + 32 = F$ (e.g. $14 \times 9/5 + 32 = 57.2$, rounded to 57)

KM to MI: $KM / 1.609344 = MI$ (e.g. $19 / 1.6093 = 11.8064$, rounded to 12)

Each line of output should contain the high and low temperatures in Fahrenheit, followed by the wind speed in Miles/Hour. Round your results to nearest integer. Be sure to append the letter “F” after each temperature and the string “MPH” after each wind speed, as shown in the sample output.

Sample Input

```
3
14 7 19
19 9 13
26 12 11
```

Sample Output

```
57F 45F 12MPH
66F 48F 8MPH
79F 54F 7MPH
```

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There are two main temperature scales: °F, the Fahrenheit Scale (used in the US), and °C, the Celsius Scale (part of the Metric System, used in most other countries)

They both measure temperature, but use different numbers:

Boiling water (at normal pressure) measures 100° in Celsius, but 212° in Fahrenheit

As water freezes it measures 0° in Celsius, but 32° in Fahrenheit

The scales rise at a different rate (100 vs 180), so we will need to multiply or divide by 100/180.

The scales start at a different number (0 vs 32), so we will need to add or subtract 32.

To convert from Celsius to Fahrenheit: first multiply by 180/100 (or 9/5), then add 32

To convert from Fahrenheit to Celsius: first subtract 32, then multiply by 100/180 (or 5/9)

<https://www.mathsisfun.com/temperature-conversion.html#explanation>

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