Temperature conversion   X37636_en

Write a code that converts temperatures in Celsius degrees to Fahrenheit degrees and vice versa. We recall that t Celsius degrees are $1.8t + 32$ Fahrenheit degrees.

Exam score: 3.00 **Automatic part:** 40.00%

Input

The input consists of a non-negative integer n followed by a sequence of n temperature measurements. Each measurement consists of a letter C or F that shows the scale and a real number that indicates the degrees on the scale.

Output

For each input measurement a line with the equivalent temperature on the other scale. Thus, if the measurement at the input is in Fahrenheit degrees, at the output it must be in Celsius degrees and vice versa. Follow the format of the examples.

Sample input

```
8
C 0
F 32
F 0
C -4.5
F 65
C 12
C 29
F 53.5
```

Sample output

```
F 32.0
C 0.0
C -17.8
F 23.9
C 18.3
F 53.6
F 84.2
C 11.9
```

Observation

To follow the convenient format, write the following two code lines at the beginning of the `main()`

```
cout.setf(ios::fixed);
cout.precision(1);
```

Problem information

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