

Fahrenheit

Write a program that converts temperature to Celsius if it's given in Fahrenheit (input will have an 'F' after the number), or viceversa, if it's given in Celsius (input will have a 'C' after the number).

At least two decimal places must be exact. Other decimals are ignored.

If C is the temperature in Celsius, the conversion formula to Fahrenheit is: $F = 32 + 9 \cdot C / 5.0$

If F is the temperature in Fahrenheit, the conversion formula to Celsius is: $C = 5 \cdot (F - 32) / 9.0$

Input

One line with an integer number (between -200 and 100), a space, and a letter ('C' or 'F')

Output

The temperature converted, in the same format as the input (a number, a space, and a letter 'C' or 'F' indicating if it was converted to Celsius or Fahrenheit, respectively).

Example

Input:
22 C

Output:
71.6 F