

2373 The Temperature Table

A scientist is conducting an experiment that requires periodic recording of the temperature of a solution. Unfortunately, the only temperature measurement device reports the temperature in degrees Fahrenheit, and he must record the temperature in Centigrade. To simplify this task, you have been asked to provide a table with two columns, the left one with temperatures in Fahrenheit, and the right one with temperatures in Centigrade. Every integral temperature in a given range of Fahrenheit temperatures is to appear in the table, along with the integral Centigrade temperatures in the same range, and the columns are to be ordered from low to high. Only when the Fahrenheit and Centigrade temperatures are equal should there be two entries in the same row.

The conversion between Fahrenheit and Centigrade is given by the following formulas:

$$^{\circ}F = \frac{9}{5} ^{\circ}C + 32 \qquad ^{\circ}C = \frac{5}{9} (^{\circ}F - 32)$$

An example will clarify the table organization. Suppose the scientist asked for a table with temperatures in the range 30 to 34 degrees Fahrenheit. The following table would be produced:

Table 1: 30 to 34 degrees Fahrenheit

Fahrenheit	Centigrade
30	
	-1
31	
32	0
33	
	1
34	

The left column of the table contains every integral temperature in the range 30 to 34 degrees Fahrenheit. Since $32^{\circ}F$ is exactly $0^{\circ}C$, both temperatures appear in the same row. There is no integral Fahrenheit equivalent for $-1^{\circ}C$ or $1^{\circ}C$, so they appear on lines by themselves, as do the other integral Fahrenheit temperatures. Note that $-1^{\circ}C$ is between $30^{\circ}F$ and $31^{\circ}F$.

Input

The input will contain multiple cases. The input for each case consists of a pair of integers *low* and *high*, with *low* less than *high*. A pair of integers follows the last case, with the first number larger than the second.

No Fahrenheit or Centigrade temperature will require more than four columns for its display.

Output

For each input case, display the table number (they are numbered sequentially starting with one), and the desired table, with appropriate column headings. Leave one blank line between each table.

The format shown in the example above and in the samples below should be followed closely.

Sample Input

```
50 54
210 215
1 0
```

Sample Output

Table 1: 50 to 54 degrees Fahrenheit

Fahrenheit Centigrade

```
-----
50          10
51
           11
52
53
           12
54
```

Table 2: 210 to 215 degrees Fahrenheit

Fahrenheit Centigrade

```
-----
210
           99
211
212        100
213
           101
214
215
```