

Problem 4—7/11 Pricing  
*written by Andy Poe and Dave Powers*

Although Michelle Kwan does most of her shopping at—you guessed it—the Circle K, she also has a fondness for the 7/11. She often wonders if the prices of her items will have an equal sum and product. And could that sum and product equal 7.11? Given a total cost and a total number of items, determine the exact cost of each item for them to add and to multiply to the exact same number.

**INPUT SPECIFICATION.** The input will contain multiple cases. The input for each case will be a positive integer, representing the number of items (2-4), one space, the total cost of the items, and <EOLN>. The last input case will be followed by “-1<EOLN>”.

**OUTPUT SPECIFICATION.** For each case, output the string “Case *c*: *list*<EOLN><EOLN>” where *c* is the case number and *list* is the list of prices items arranged from smallest to largest separated by a comma and a space and printed with two digits to the right of the decimal point. The sum and product must *exactly* equal the input price. There is no accounting for round-off error in this problem. No input or output case will involve fractions of a cent; however, it may well be that the prices involved are not even dollar amounts. The answer will be unique for each case.

**SAMPLE INPUT.**

```
2·4.00<EOLN>
3·6.00<EOLN>
-1<EOLN>
<EOF>
```

**SAMPLE OUTPUT.**

```
Case·1:·2.00,·2.00<EOLN>
<EOLN>
Case·2:·1.00,·2.00,·3.00<EOLN>
<EOLN>
<EOF>
```