The Independent College for Primary Children down the road from you has decided to launch a pro-gramme to teach its grade 3 learners basic mathematical skills. They have found that the learners struggle with long division problems and approached you to write a program that given the numerator and denominator, will produce a step-wise solution.

The process of long division works as follows (using numerator 124, and denominator 3 as example):

1.	First the denominator is written down, followed by a | and then the numerator	<pre>3|124</pre>

2.	Next, a + is aligned above the |, followed by a - over every digit of the numerator	<pre>+---
		3|124</pre>

3.	At this point you take the most significant (further left) digit of the numerator, and divide that by the denominator, and write the answer directly above the digit that was divided (1 divided by 3 is 0)	<pre> 0 +--- 3|124</pre>
4.	Next up you take the result (0), and multiply it with the denominator (call this product m), and write that directly beneath the digit that was divided, and draw a line beneath that using -	<pre> 0 +--- 3|124 0 -</pre>
5.	You then take the original digit that was divided, and from that subtract m. Note that if the result here is zero nothing should be written unless this is the last digit and there are no further digits to carry down	<pre> 0 +--- 3|124 0 - 1</pre>
6.	Now you simply carry the next most significant digit down	<pre> 0 +--- 3|124 0 - 12</pre>
7.	At this point you take what you've got at the bottom, and divide that by the denominator (which is guaranteed to be less than 10), and write this next to the previous answer digit. In the example 12 divided by 3 is 4, which goes next to the initial 0.	<pre> 04 +--- 3|124 0 - 12</pre>

8.	At this point you simply repeat from step 4, using only the just added digit for the multiplication, you repeat this process until there are no further digits to carry down	<pre> 041
		+---
		3|124
		 0
		 -
		 12
		 12
		 --
		    4
		    3
		    -
		    1</pre>

9.	In the above case the final post-subtraction number is non-zero and the divi-sion thus has a remainder, which needs to be shown as part of the answer, by adding a r1 (remainder 1, this 1 needs to be whatever the remainder is), and extending the line directly beneath the answer to also be under the remainder	<pre> 041r1
		+-----
		3|124
		 0
		 -
		 12
		 12
		 --
		    4
		    3
		    -
		    1</pre>

A few notes:

- The horizontal line, for subtraction, spans exactly under the value of m.

- When subtracting the only time a zero-digit (0) should be printed is if it's the last subtraction.

- Leading 0s in the answer are not discarded.

Input

Input consists of an arbitrary number of records, but no more than 20.

Each record consist of two numbers, the numerator (n) and the denominator (d). As these are young learners, restrictions of have been placed on the numerator and denominator, $2 \leq n \leq 144$ and $1 \leq d \leq 9$.

The end of input is indicated by a line containing only the value '-1'.

Output

You need to show the result of the long division in the format that the teacher taught the learners. Each long division problem will be represented by a number of lines of working out. Output '-*-' on a new line after each result.

WARNING: White space in this problem is important. Without this alignment won't be correct, and your solution will be marked as incorrect. This includes trailing white spaces, which must be avoided.

Sample Input

```
10 2
124 3
40 4
144 9
-1
```

Sample Output

```
  05
 +--
2|10
 0
 -
 10
 10
 --
  0
-*-
  041r1
 +-----
3|124
 0
 -
 12
 12
 --
    4
    3
    -
    1
-*-
  10
 +--
4|40
 4
 -
  0
  0
  -
  0
-*-
  016
 +---
9|144
 0
 -
 14
 9
 -
 54
 54
 --
  0
-*-
```