

## The solution

Here's the final grid.

	H	I	S	H
F	0	0	0	0
I	0	1	0	0
S	0	0	2	0
H	0	0	0	3

Here's my formula for filling in each cell.

1. IF THE LETTERS  
DONT MATCH,  
THE VALUE IS  
ZERO.

	H	I	S	H
F	0	0	0	0
I	0	1	0	0
S	0	0	2	0
H	0	0	0	3

2. IF THEY DO MATCH,  
THIS VALUE IS  
VALUE OF TOP-LEFT NEIGHBOR + 1

Here's how the formula looks in pseudocode:

```

if word_a[i] == word_b[j]: <----- The letters match.
    cell[i][j] = cell[i-1][j-1] + 1
else: <----- The letters don't match.
    cell[i][j] = 0
  
```