## Adding subrectangles P88567_en

Given a grid with uppercase letters, compute the sum of the values of the letters in each rectangle with a corner in the upper-left extreme. The values of the letters are `'A'` = 1, `'B'` = 1 + 2 = 3, `'C'` = 1 + 2 + 3 = 6, `'D'` = 1 + 2 + 3 + 4 = 10, etcetera, up to `'Z'` = 351.

### Input

Input consists of $0 < r \leq 500$ lines, all of them with the same number of uppercase letters $0 < c \leq 500$.

### Output

Print $r$ lines with $c$ numbers each. The $j$-th number of the $i$-th row must be the sum of the values of the letters of the rectangle whose corners are the first letter of the input, and the $j$-th letter of the $i$-th row.

### Hint

Consider using the inclusion-exclusion principle.

### Sample input 1

```
ZA
AZ
```

### Sample output 1

```
351 352
352 704
```

### Sample input 2

```
ABCD
EFGH
IJKL
```

### Sample output 2

```
1 4 10 20
16 40 74 120
61 140 240 364
```

### Problem information

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