

59 Given ['AB', 'CDE', 'F', ..., 'YZ']

Width: w

1. join the words with empty space
2. get the index of the end of a screen line $w - 1$

there are 3 cases:

Case 1:

"AB-CDE-F-...-YZ" ('-' denotes a space)

reach to the space before F

Case 2:

"AB-CDE-F-..._YZ" ('-' denotes a space)

reach to exactly E

Case 3:

"AB-CDE-F-...-YZ" ('-' denotes a space)

reach to D

case 1, I can count one more bit and go to next line

case 2, I can count two more bits and go to next line

case 3, I have to move the cursor back until it reach to some space, and go to next line

When I go through all the rows, how many bits did I counted? Let's say L, then the answer should be $L / \text{length of the string}$

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class Solution(object):
    def wordsTyping(self, sentence, rows, cols):
        s = ' '.join(sentence) + ' '
        start = 0
        for i in xrange(rows):
            start += cols - 1
            if s[start % len(s)] == ' ':
                start += 1
            elif s[(start + 1) % len(s)] == ' ':
                start += 2
            else:
                while start > 0 and s[(start - 1) % len(s)] != ' ':
                    start -= 1
        return start / len(s)
```