

### “Paragraph Analyzer”

**Problem:** Analyze two paragraphs. For each paragraph, print the number of distinct words in the paragraph, and print the  $K$ th smallest in alphabetical order. For the second paragraph only, print the number of distinct words that contain exactly  $M$  letters. Label your outputs.

You can input the two paragraphs in whatever way is convenient for you. Do not distinguish between upper and lower case letters. Words are terminated by white space or punctuation (commas, hyphens, colons, and semi-colons). Sentences are terminated by a question mark or a period.

You’ll also need to input a value of  $K$  for each paragraph, and a value of  $M$  for the second paragraph. In the sample data below,  $K = 5$  for the first paragraph, and  $K = 9$  and  $M = 5$  in the second paragraph.

**Sample Input:**

**Paragraph 1:** To be or not to be, that’s the question.

**Paragraph 2:** A wise man is not one who knows  
all the answers. But one who knows how to  
find the answers. A foolish man is one who  
knows neither.

**Sample Output:**

**Output #1:** number of distinct words in paragraph 1: 7  
**Output #2:** the 5th smallest distinct in paragraph 1: that’s  
**Output #3:** number of distinct words in paragraph 2: 17  
**Output #4:** the 9th smallest distinct word in paragraph 2: knows  
**Output #5:** the number of distinct words in paragraph 2 of length=5: 1

(Note: The distinct words in the 1st paragraph, in sorted order, are: be not or question that’s the to. The length of the word that’s is 6 characters. The distinct words in the 2nd paragraph, in sorted order, are: a but all answers find foolish how is knows man neither not one the to who wise.)

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**Test Input:**

**Paragraph 1:**

$K = 8$

Did he ever return? No, he never returned  
and his fate is still unknown. He may ride  
forever neath the streets of Boston, he’s  
the man who never returned.

**Paragraph 2:**

$K = 20, M = 4$

Oh, somewhere in this favored land the sun is shining bright,  
the band is playing somewhere, and somewhere hearts are light.  
And somewhere men are laughing, and little children shout;  
but there is no joy in Mudville. Mighty Casey has struck out.

**Test Output:**

**Output #1:** number of distinct words in paragraph 1: 24

**Output #2:** the 8th smallest distinct word in paragraph 1: he’s

**Output #3:** number of distinct words in paragraph 2: 32

**Output #4:** the 20th smallest distinct word in paragraph 2: Mudville

**Output #5:** the number of distinct words in paragraph 2 of length=4: 2