Well, in many cases, a human expert might read a book and make a decision on the grade for which they think the book is most appropriate. But you could also imagine an algorithm attempting to figure out what the reading level of a text is.

One such readability test is the Coleman-Liau index. The Coleman-Liau index of a text is designed to output what (U.S.) grade level is needed to understand the text. The formula is:

index = 0.0588 \* L - 0.296 \* S - 15.8

Here, L is the average number of letters per 100 words in the text, and S is the average number of sentences per 100 words in the text.

Let’s write a program called readability that takes a text and determines its reading level

Design and implement a program, readability, that computes the Coleman-Liau index of the text.

* Your program must prompt the user for a string of text (using get\_string).
* Your program should count the number of letters, words, and sentences in the text. You may assume that a letter is any lowercase character from a to z or any uppercase character from A to Z, any sequence of characters separated by spaces should count as a word, and that any occurrence of a period, exclamation point, or question mark indicates the end of a sentence.
* Your program should print as output "Grade X" where X is the grade level computed by the Coleman-Liau formula, rounded to the nearest integer.
* If the resulting index number is 16 or higher (equivalent to or greater than a senior undergraduate reading level), your program should output "Grade 16+" instead of giving the exact index number. If the index number is less than 1, your program should output "Before Grade 1".