An index is a numerical scale. Characteristics of an index can be used for the following:

* To compare variables with one another or a reference number,
* To give information about general trends, and
* To help make comparisons and judgments.

It is often calculated as a weighted sum of various factors resulting in a single summary number.

**Fog Index**: The Fog Index, which was developed by Robert Gunning in 1952, measures the readability of a piece of writing. Calculation of the index produces a number that indicates the years of education a person needs to have to easily understand the text. For example, a passage with a Fog Index of 8 has an eighth-grade reading level. ***See student textbook for more details on page Unit I-73-74.***

Formula: $FI=0.4\left(\frac{number of words}{number of sentences} +100 ●\frac{number of complex words}{number of words}\right)$

**Flesch-Kincaid Grade Level Index**: Another widely used measure is the Flesch/Flesch–Kincaid Readability Tests, which consist of the Flesch Reading Ease (developed by Rudolph Flesch in 1948) and the Flesch–Kincaid Grade Level (developed by John P. Kincaid in 1976). The Flesch–Kincaid Grade Level Index converts the Flesch Reading Ease into a number that indicates the years of education a person needs to have to easily understand the text.

Calculate the Flesch–Kincaid Grade Level Index (FKGLI) using the following formula:

Formula: $FKGLI=0.39\left(\frac{number of words}{number of sentences} +11.8 ●\frac{number of syllables}{number of words}\right)-15.59$

**Declaration of Independence (excerpt)**

We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. — That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed. — That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

1. Find the Fog Index and the Flesch-Kincaid Grade Level Index of the excerpt of the Declaration of Independence.

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We hold these truths to be **self-evident**, that all men are created equal, that they are endowed by their **Creator** with certain **unalienable** Rights, that among these are Life, **Liberty** and the pursuit of **Happiness**. — That to secure these rights, **Governments** are **instituted** among Men, deriving their just powers from the consent of the governed. — That **whenever** any Form of **Government** becomes **destructive** of these ends, it is the Right of the People to alter or to **abolish** it, and to **institute** new **Government**, laying its **foundation** on such **principles** and **organizing** its powers in such form, as to them shall seem most likely to effect their Safety and **Happiness**.

Check your answer for the Flesch-Kincaid Grade Level Index using MS Word. (Go to the Help section and look up Readability to find how to access this score.)

One of the most famous speeches in U.S. history is the Gettysburg Address—a 275-word speech that required only a few minutes to deliver.

**Gettysburg Address**

Four score and seven years ago our fathers brought forth on this continent a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation, so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we cannot dedicate—we cannot consecrate — we cannot hallow —this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us — that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion — that we here highly resolve that these dead shall not have died in vain — that this nation, under God, shall have a new birth of freedom — and that government of the people, by the people, for the people, shall not perish from the earth.

2. Find the Fog Index and the Flesch-Kincaid Grade Level Index for the Gettysburg Address.

3. Find the Fog Index and the Flesch-Kincaid Grade Level Index for a passage of around 100 words from one of your favorite books or short stories.

4. Find the Fog Index and the Flesch-Kincaid Grade Level Index for a passage of around 100 words from your science textbook.