# Wikinflection Corpus: A (Better) Multilingual, Morpheme-Annotated Inflectional Corpus

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## Abstract

Multilingual, inflectional corpora are a scarce resource in the NLP community, especially corpora with annotated morpheme boundaries. We are evaluating a generated, multilingual inflectional corpus with morpheme boundaries, generated from the English Wiktionary (Metheniti and Neumann, 2018), against the largest, multilingual, high-quality inflectional corpus of the UniMorph project (Kirov et al., 2018). We confirm that the generated Wikinflection corpus is not of such quality as UniMorph, but we were able to extract a significant amount of words from the intersection of the two corpora. Our Wikinflection corpus benefits from the morpheme segmentations of Wiktionary/Wikinflection and from the manually-evaluated morphological feature tags of the UniMorph project, and has 216K lemmas and 5.4M word forms, in a total of 68 languages.

**Keywords:** inflection, morphological inflection, inflectional corpus, inflection annotation

## 1. Introduction

Inflection is the linguistic process in which a word acquires morphological features, which allow it to create syntactic dependencies with its context or express an additional nuance without changing the word's core meaning, e.g. number, time. To create inflection on a word-surface level, different languages make different choices on what transformations will occur to the stem of the word, what morphemes will be added (at the end, start, middle, and how many of them). Knowledge on the way a language creates inflections is crucial, in order to be able to identify and create different forms of the base word, the *lemma*, (re-inflection) and be able to reverse the process (lemmatization).

In this paper, we are describing our method of creating a multilingual inflectional corpus, using two available inflectional corpora; the corpus from the UniMorph project (Kirov et al., 2018), and the corpus we generated from the paper and code of the Wikinflection project (Metheniti and Neumann, 2018). The UniMorph corpus is the largest to date inflectional corpus, including 108 languages and ∼10.7 word forms, and has been extensively evaluated and enriched with other resources. However, it only includes entire word forms, without information on a sub-word level; meanwhile, Wikinflection generates a corpus of 6.4M words in ∼140 languages, and offers the morpheme segmentations of word forms as they exist in the English Wiktionary templates. We test the robustness and quality of the generated Wikinflection corpus by generating an iteration of the Wikinflection corpus and running our old evaluation script. In addition, we also evaluate Wikinflection with the UniMorph corpus. Results show that Wikinflection is of lower quality than UniMorph, due to the lack of manual evaluation, with the most serious problem being the inability to capture all grammatical tags for some word forms.

From our findings, we were also able to create a new corpus, the Wikinflection corpus, from the generated corpus of Wikinflection and the UniMorph corpus, by evaluating Wikinflection with UniMorph. Our corpus has 216K lemmas and 5.4M word forms, in 68 languages, with the morpheme segmentations for every word form from Wikinflection and evaluated on word forms with UniMorph and using the morphological feature tags of UniMorph, converted to the Universal Dependencies tag set (Nivre et al., 2018). Our corpus is released on GitHub[1].

## 2. Previous Work

There is a limited amount of corpora with inflectional information made available to the NLP community, because manual segmentation and evaluation are difficult, costly and time-consuming. Automatic segmentation is favoured, with semi-supervised or unsupervised methods (Cotterell et al., 2015; Ruokolainen et al., 2016; Cotterell et al., 2016). Only a few corpora have a significant number of entries that are annotated for morphological inflections and with segmented words; *CELEX* for English, Russian, German and Dutch (Baayen et al., 1996), the *Tübingen Treebank of Written German* for German (Telljohann et al., 2004), *Korpus 2000* for Danish (Asmussen, 2001), *Corpus Of Serbian Language (CSL)* for Serbian (Kostič, 2001), *Stockholm Umeå Corpus* for Swedish (Ejerhed et al., 2006), the dataset of the *Morpho Challenge* for English, Finnish and Turkish (Kurimo et al., 2010), *Italian Content Words v3* for Italian (Grella, 2018).

A widely-used source for gathering data and creating corpora is Wiktionary, the open-access, crowd-sourced multilingual dictionary of the Wikimedia foundation. The Wiktionary, in its many source languages, offers various linguistic information on the target words; while some is easily accessible from the XML dump files, such as translations (Acs et al., 2013) and lexical-semantic information (Zesch et al., 2008), other information is not explicitly present, but is generated. The conjugation and declension of lemmas is, unfortunately, not readily available via

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[1] github.com/lenakmeth/
Wikinflection-Corpus

the parsing tools and the resources made available by the Wikimedia foundation, but is created with the use of *inflectional templates* and *inflectional modules*. Every time the online HTML page of a lemma is accessed, the inflectional templates (human-readable templates of inflectional classes, created by the Wiktionary community) and modules (machine-readable code in `Lua`) linked to this lemma are used to generate the inflectional tables in the page. Therefore, the inflectional paradigm is not explicitly embedded in the static XML file that generates the online page[2].

However, there have been some attempts to mine Wiktionary for its inflectional information. *IWNLP* (Liebeck and Conrad, 2015) is a parser for the German Wiktionary, which is able to access the lemma's inflectional template and recreate its inflectional paradigm. Their method involved re-implementing the `Lua` modules for inflectional templates of Wiktionary into `C#`, and then using these inflectional templates alongside lemmas to generate inflectional paradigms with inflectional segmentations (as given by the templates). While they achieved very high quality and accuracy, their method requires great effort and is only used on a fraction of the German words in Wiktionary.

The *Universal Morphology* (UniMorph) project is a long-standing project which has released the largest multilingual inflectional corpus to date (UniMorph 2.0), generated by the English Wiktionary (Kirov et al., 2018). Their approach to extracting the relevant information from the Wiktionary is different than that of Liebeck and Conrad (2015); they used the static HTML pages of Wiktionary instead of the offline resources, which allowed them to capture word forms that are explicitly written and not generated by a template or word forms which are dictionary entries but not lemmas. These word forms, however, are not segmented to their morphemes, as such information is only available through templates in Wiktionary. They annotated their inflectional paradigms with their own UniMorph schema (Sylak-Glassman et al., 2015), which aims to capture all morphological features of human languages in one unified notation. Unlike the 1.0 version of UniMorph (Kirov et al., 2016), the UniMorph 2.0 corpus is generated by the inflectional tables of the lemma, the tables were grouped based on similarity, and human annotators evaluated, annotated and corrected the pairs of word forms and generated morphological feature tags. This ensured that the UniMorph 2.0 corpus has gold-standard word forms and high-quality annotations for all the 400K inflectional paradigms and 10.7M word forms present.

Another approach to mine the English Wiktionary for inflectional information is *Wikinflection* (Metheniti and Neumann, 2018). Our approach made use of the static HTML inflectional tables of the Wiktionary, to recreate inflectional templates which could then be associated (with the Wiktionary's dynamic links) and used with lemmas in the Wiktionary XML dump file, to generate inflectional paradigms with inflectional morpheme boundaries, where the segments added by the template are considered to be the word's

inflectional morphemes. We also offered a script to randomly evaluate the inflectional templates, by randomly selecting one corresponding lemma and inflectional paradigm for each template, and checking the lemma's HTML page on Wiktionary. Before evaluation, our generated corpus has 225.453 inflectional paradigms and 1.708 inflectional templates, generating 8.426.480 inflected words, in a total of 199 languages. After performing some random evaluations, we reported different numbers for each evaluation; random evaluation 3 returned 210.172 inflectional paradigms and 1.521 templates, and 6.024.077 word forms for 138 languages. We have thoroughly documented the shortcomings of generating inflections without extensive and human evaluation, mostly due to the conflicting styles and templates used across different target languages in the English Wiktionary; our approach to massively gather information from the diversely structured tables of the Wiktionary led sometimes to partial loss of morphological tags. In addition, we were also critical of our own method of evaluation, because it is prone to errors and returns different results in every evaluation run.

## 3.  Re-evaluating Wikinflection

In our previous paper, we (Metheniti and Neumann, 2018) presented our method of generating inflections by reverse-engineering the process in which the Wiktionary server generates inflections on command, every time the page of a dictionary entry is loaded. From the Wiktionary XML dump file, we find words that are lemmas and have inflectional information, we gather the dynamic links that connect a lemma to its corresponding inflectional template, and then we look up the HTML pages for these inflectional templates. With the parsed templates and the information provided in the dynamic link (stem, stem allomorphs, phonetic additions), we expect to be able to exactly recreate the inflectional paradigms as presented in the HTML page of a lemma, and maintain the morpheme boundaries among the stem/stem allomorph and the inflectional morphemes.

A method of evaluation, however, is necessary; for each of the 1.708 unique inflectional templates, we randomly choose a lemma associated with that template, we look up the online HTML page for the lemma in Wiktionary, and we remove any generated word forms which were not found in the HTML page. This method of evaluation was selected because there are not large enough corpora for all the 199 languages for which Wikinflection has generated paradigms, and even in high-resource languages, some inflected types are very rare. However, this method of evaluation does not guarantee gold-standard quality; as the authors document, three different executions of our evaluation script produced corpora of different sizes; for example, when the template for Latin second declension was evaluated with the noun *campus* "campus", all word forms were deemed correct and thus no corrections were made in the template, but when it was evaluated with the proper noun *Herostratus*, the word forms associated with the plural number were not found because the proper noun does not exist in plural.

We decided to run the Wikinflection code, generate the corpus via the Metheniti and Neumann (2018) script and

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[2]We have previously explained in detail the process of generating inflections in Wiktionary in Metheniti and Neumann (2018).

| Corpus type | No. languages | Inflectional templates | No. Lemmas | No. Words |
|---|---|---|---|---|
| **Non-evaluated** | 149 | 1.810 | 274.798 | 9.320.503 |
| **Wiktionary Evaluation** | 140 | 1.614 | 254.712 | 6.447.613 |
| **UniMorph Evaluation** | 68 | 977 | 216.624 | 5.410.746 |

Table 1: The size of the generated Wikinflection corpus (number of languages present, number of (correct and updated) inflectional templates, number of lemmas and number of inflected word forms. The first row refers to the generated corpus from Wikinflection, without evaluation, the second row refers to the Wikinflection corpus after the one random evaluation we performed using Wiktionary and our Wikinflection script, and the third row refers to the evaluation we performed using the UniMorph corpus.

then, at first, evaluate with the evaluation script we previously used and provided in the Wikinflection repository [3]. We used the latest English Wiktionary XML dump file (November 21, 2019) alongside the `Python3` code. The results of the generated corpus, before evaluation, are shown in the first row of Table 1; we assume that our numbers are higher than the ones reported for the generated corpus in Metheniti and Neumann (2018) (mentioned in Section 2.) because the Wiktionary is constantly adding new dictionary entries and improving the existing templates. We then ran the evaluation script as provided by the authors, and we report the results in the second row of Table 1. The numbers are, foreseeably, lower than in the non-evaluated corpus, and are close to the evaluation runs that the authors have reported in our previous work. However, we still cannot guarantee that these evaluated, generated paradigms are of high quality; the evaluation log showed us which random lemma was picked for each inflectional template and how many word forms were corrected from each template. We manually checked a few of the corrected templates, by accessing the HTML pages of the inflectional templates and the chosen lemmas, and we noticed the problems with the evaluation. For example, the inflectional template `es-conj-ír`[4] for verbs ending in *-ír* in Spanish; even after the evaluation, there were four duplicate forms of the infinitive form in the template. On the other hand, the inflectional template `fi-decl-käsi-kulkija`[5] for Finnish nouns was erroneously found entirely incorrect, because the randomly chosen word for this template, *Uusi-Kaledonia*[6] "New Caledonia", is a proper noun without plural, and different rules in Wiktionary applied outside of inflectional templates implement these transformations in the lemma's page.

Since, in order to perform an evaluation on all the Wikinflection languages, we need a source of inflected forms as big and multilingual as in the Wiktionary, we considered

that we could use the UniMorph corpus for evaluation, as it is also created with the use of the English Wiktionary, is larger than the Wikinflection corpus, and is manually evaluated. We downloaded the current versions of the repositories for each available language, and in Table 2 we are presenting the current size of each language's corpus. We ran the evaluation in the same method followed as in Metheniti and Neumann (2018); we are randomly selecting one corresponding lemma for every non-evaluated template, we are generating its inflectional paradigm, and then we are checking the existence of each word form in the UniMorph corpus. We then check, for each word, whether its morphological tags from the generated template and the morphological tags of UniMorph are a (partial) match[7], and if they are, we overwrite them with the UniMorph features in the corresponding position of the template. In order to perform this, we have to convert the UniMorph schema to the Universal Dependencies schema (Nivre et al., 2018), because Wikinflection is built on Universal Dependencies. We used a conversion list provided by McCarthy et al. (2018) in their Github repository [8].

We are presenting the results of our evaluation with UniMorph in Table 1 as well. First of all, we notice a drop in the remaining languages, because UniMorph has 108 languages compared to the 149 in Wikinflection, and the reason that we have even fewer is that UniMorph was enriched with sources other than Wiktionary (e.g. corpora in Italian, Grella (2018)), or some languages in Wiktionary do not have any inflectional templates with significant inflectional information (e.g. Ancient Greek). The number of inflectional templates has been halved, but we can deduce that the remaining templates are of good quality since they have been evaluated with UniMorph, and we also ensured to get rid of the duplicate word forms in the templates. We notice that the Wikinflection corpus lacks some high-resource languages present in UniMorph, such as French, or has a dramatically smaller number of lemmas and word forms, such as in Arabic and Portuguese. This is probably due to the lack of or the bad structure of the inflectional templates for these languages in Wiktionary, which Wikinflection was not able to parse. However, we notice that for some languages (e.g. Ingrian, Veps) the evaluated Wikinflection has more word forms than UniMorph; this is because we evaluate the templates, and generate the word forms. It is possible that the UniMorph project has not fully queried all the HTML pages for dictionary entries for a language, but since we are using the XML file, we have access to all dictionary entries and can create inflections for whichever lemmas are linked with inflectional templates.

In order to check the improvement in quality that the evaluation with UniMorph brought, we decided to pick one of the randomly chosen words from the previous Wiktionary evaluation, so that we can compare all the evaluated and non evaluated outputs with a human evaluation. We se-

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lected[9] the Spanish verb *sofreír* "to fry lightly", which is linked to the inflectional template `es-conj-ír` which was problematic in the Wiktionary evaluation, and we examined the paradigms from the corpora and the evaluations. We are presenting four different paradigms of this lemma; the non-evaluated lemma from Wikinflection (Table 4), the paradigm from the UniMorph corpus (Table 5), the Wiktionary-evaluated, generated paradigm from Wikinflection (Table 6) and the UniMorph-evaluated generated paradigm (Table 7). First, we notice the many duplicate forms in the Wikiflection paradigms, a problem which also exists in the Wiktionary-evaluated corpus, but is dealt with with our UniMorph evaluation. Second, we notice that in Wikinflection, both in the non-evaluated and the evaluated versions, there are word forms with incomplete tags; by copying the UniMorph tags, we are ensuring the complete morphological annotation of each word form. Overall, our generated and evaluated paradigm is not complete, but the word forms present are unique, correct and fully annotated both for morpheme boundaries and morphological features.

## 4. A new corpus: Wikinflection + UniMorph

Following this evaluation process, we believe that it would be beneficial to release the result of evaluating Wikinflection with UniMorph as an open-access resource. This corpus includes the segmentations of inflectional morphemes for every word form, as found in the Wiktionary templates and in Wikinflection, is evaluated with the use of the manually-evaluated UniMorph, and has UniMorph's manually-annotated morphological tags. We opted for the use of the Universal Dependencies 2 schema, as opposed to the original UniMorph, since we have already converted the tags to the UD tags on the evaluation stage, and also because currently the UD schema is more commonly used in NLP applications (e.g. dependency parsers). The full list of languages and lemmas and word forms per language can be found in Table 3. We are also going to make use of the ISO 639-3 language codes, as UniMorph does, to ensure uniform language tags; both the Wiktionary and Wikinflection use different versions of the ISO 639 protocol for languages (e.g. the tag *fi* for Finnish is from ISO 639-1, and ISO 639-3 uses *fin*). An example of the format of our corpus can be seen in Table 7, for the lemma *sofreír*.

As happened during the the evaluation of Wikinflection with the Wiktionary, we run in the risk of false negatives, when evaluating an inflectional template with a random lemma that possibly does not have all forms of a template. Therefore, we ran the evaluation twice, and the corpus and the numbers we report in Table 3 are the results of two evaluation runs with UniMorph and their combination.

## 5. Discussion

Our work started as an effort to assess the quality of the Wikinflection corpus, the largest inflectional corpus to date (openly available) to include inflectional morpheme boundaries. We discovered that the corpus, because it is automatically generated, has several weaknesses, especially when

compared to UniMorph, a carefully-evaluated inflectional corpus from a long-standing research project. However, we were able to evaluate Wikinflection with the use of UniMorph, and discovered that a significant portion of Wikinflection is on par with the UniMorph standards. From our evaluation results, we used the intersection of the two corpora to create a new one, with the strengths of each: the morpheme boundaries of Wikinflection and the gold-standard morphological tags of UniMorph.

We are aware of the weaknesses of our work; our inflectional paradigms are not complete, because of the method the inflectional information is parsed by and included in Wikinflection. We also aim to perform a more in-depth analysis of the corpora, on a manual level, to ensure that there are no false positives/negatives cause by the inflectional templates of Wiktionary and Wikinflection. However, we are confident that the quality of the Wikinflection corpus, after the evaluation with UniMorph, is on par with the UniMorph standards, for the present word forms and morphological feature tags.

Finally, we would like to address the fact that the inflectional morphemes, in Wiktionary and subsequently in Wikinflection and our corpus as well, are in most cases composites and not broken down to the smallest possible units; for example, *sofreiremos* "we will fry lightly" (see Tables 4-7) is decomposed to *sofre-iremos*, but should have been analyzed as:

$$sofre\text{-}ir_{[+future]}\text{-}emos_{[+1st.pers.plural]}$$

This is a weakness of the way inflectional templates in Wiktionary are crafted, and if we would like to deal with this issue (which could prove serious for agglutinative languages such as Finnish), we would need language-specific knowledge and many resources, to ensure gold-standard quality. We aim to address this in a following edition of our corpus, but even with this problem, we see merit in releasing our work to be freely used by the NLP community, especially since our corpus currently includes a meaningful number of word forms for many low-resource languages (Ingrian, Pashto, Classic Syriac, Veps).

## 6. Acknowledgements

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[9]Out of the randomly evaluated words and templates, we chose a language and grammar which we are familiar with, in order to also be able to evaluate the word forms personally.

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| Language | ISO 639-3 | Words | Lemmas | Language | ISO 639-3 | Words | Lemmas | Language | ISO 639-3 | Words | Lemmas |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adyghe | ady | 20475 | 1666 | Scottish Gaelic | gla | 781 | 73 | Dutch | nld | 55467 | 4993 |
| Old English | ang | 42425 | 1867 | Irish | gle | 107298 | 7464 | Norwegian Nynorsk | nno | 15319 | 4689 |
| Arabic | ara | 140003 | 4134 | Manx | glv | 14 | 1 | Norwegian Bokmål | nob | 19238 | 5527 |
| Mapudungun | arn | 783 | 26 | Middle High German | gmh | 708 | 29 | Occitan | oci | 8316 | 174 |
| Asturian | ast | 29797 | 436 | Middle Low German | gml | 1513 | 52 | Livonian languages | olo | 3187* | 203* |
| Azerbaijani | aze | 8004 | 340 | Gothic | got | 0* | 0* | Old Saxon | osx | 22287 | 863 |
| Bashkir | bak | 12168 | 1084 | Ancient Greek | grc | 41593 | 2431 | Polish | pol | 201024 | 10185 |
| Belarusian | bel | 16113 | 1027 | Haida | hai | 7040 | 41 | Portuguese | por | 303996 | 4001 |
| Bengali | ben | 4443 | 136 | Serbo Croatian | hbs | 840799 | 24419 | Pashto | pus | 6945 | 395 |
| Tibetan | bod | 353 | 65 | Hebrew | heb | 13818 | 510 | Quechua | que | 180004 | 1006 |
| Breton | bre | 2294 | 44 | Hindi | hin | 54438 | 258 | Romanian | ron | 80266 | 4405 |
| Bulgarian | bul | 55730 | 2468 | Hungarian | hun | 490394 | 13989 | Russian | rus | 473481 | 28068 |
| Catalan | cat | 81576 | 1547 | Armenian | hye | 338461 | 7033 | Sanskrit | san | 33847 | 917 |
| Czech | ces | 134527 | 5125 | Icelandic | isl | 76915 | 4775 | Old Irish | sga | 1089 | 49 |
| Old Church Slavonic | chu | 4148 | 152 | Italian | ita | 509574 | 10009 | Slovenian | slv | 60110 | 2535 |
| Central Kurdish | ckb | 22990 | 274 | Ingrian | izh | 1099 | 50 | Northern Sami | sme | 62677 | 2103 |
| Cornish | cor | 469 | 9 | Greenlandic | kal | 368 | 23 | Spanish | spa | 382955 | 5460 |
| Crimean Tatar | crh | 7514 | 1230 | Kannada | kan | 6402 | 159 | Albanian | sqi | 33483 | 589 |
| Kashubian | csb | 509 | 37 | Georgian | kat | 74412 | 3782 | Swahili | swc | 10092 | 100 |
| Welsh | cym | 10641 | 183 | Kazakh | kaz | 357 | 26 | Swedish | swe | 78411 | 10553 |
| Danish | dan | 25503 | 3193 | Kabardian | kbd | 3092 | 250 | Classical Syriac | syc | 3652 | 160 |
| German | deu | 179339 | 15060 | Khakas | kjh | 1200 | 75 | Tatar | tat | 7832 | 1283 |
| Lower Sorbian | dsb | 20121 | 994 | Khaling | klr | 156097 | 591 | Telugu | tel | 1548 | 127 |
| Modern Greek | ell | 199763 | 11906 | Northern Kurdish | kmr | 216370 | 15083 | Tajik | tgk | 77 | 75 |
| English | eng | 115523 | 22765 | Karelian | krl | 682 | 20 | Turkmen | tuk | 810 | 68 |
| Estonian | est | 38215 | 886 | Latin | lat | 509182 | 17214 | Turkish | tur | 275460 | 3579 |
| Basque | eus | 11889 | 26 | Latvian | lav | 136998 | 7548 | Ukrainian | ukr | 20904 | 1493 |
| Faroese | fao | 45474 | 3077 | Lithuanian | lit | 34130 | 1458 | Urdu | urd | 12572 | 182 |
| Persian | fas | 37128 | 273 | Livonian | liv | 3987 | 203 | Uzbek | uzb | 1260 | 15 |
| Finnish | fin | 2490377 | 57642 | Ladin | lld | 180 | 7656 | Venetian | vec | 18227 | 368 |
| French | fra | 367732 | 7535 | Ludian | lud | 400* | 124* | Veps | vep | 33196* | 868* |
| Middle French | frm | 36970 | 603 | Macedonian | mkd | 168057 | 10313 | Votic | vot | 1430 | 55 |
| Old French | fro | 123374 | 1700 | Maltese | mlt | 3584 | 112 | Classical Armenian | xcl | 97181 | 4300 |
| North Frisian | frr | 3204 | 51 | Murrinhpatha | mwf | 1110 | 29 | Norman | xno | 280 | 5 |
| West Frisian | fry | 1429 | 85 | Neapolitan | nap | 1808 | 40 | Yiddish | yid | 7986 | 803 |
| Friulian | fur | 8071 | 168 | Navajo | nav | 12354 | 674 | Zulu | zul | 49119 | 566 |
| Galician | gal | 36801 | 486 | Low German | nds | 0* | 0* | **TOTAL** | | **10688113** | **385573** |

Table 2: The languages of the UniMorph 2.0 corpus and their current statistics. With an asterisk (*) are marked the languages for which there are available resources on the Github repository of the project (`github.com/unimorph`) but no statistics were mentioned in the project's website (`unimorph.github.io`) as of November 21, 2019. We collected the relevant repositories and added the counts to this table. Please note that the UniMorph project claims to have corpora for 110 languages, but only 108 are currently available (accessed November 21, 2019).

| Language | ISO 639-3 | Words | Lemmas | Language | ISO 639-3 | Words | Lemmas | Language | ISO 639-3 | Words | Lemmas |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Adyghe | ady | 56 | 4 | Irish | gle | 48055 | 10118 | Low German | nds | 1478 | 238 |
| Old English | ang | 56833 | 4332 | Middle High German | gmh | 84 | 9 | Dutch | nld | 19816 | 4710 |
| Arabic | ara | 36 | 6 | Middle Low German | gml | 495 | 40 | Occitan | oci | 808 | 404 |
| Asturian | ast | 30141 | 373 | Gothic | got | 13447 | 1052 | Old Saxon | osx | 15167 | 838 |
| Belarusian | bel | 378 | 35 | Ancient Greek | grc | 366 | 72 | Polish | pol | 142805 | 4878 |
| Tibetan | bod | 24 | 8 | Hindi | hin | 188 | 96 | Portuguese | por | 1059 | 353 |
| Bulgarian | bul | 344 | 108 | Hungarian | hun | 467958 | 24099 | Pashto | pus | 3227 | 469 |
| Catalan, Valencian | cat | 2042 | 28 | Armenian | hye | 3715 | 317 | Romanian | ron | 7879 | 1507 |
| Czech | ces | 32 | 3 | Icelandic | isl | 488 | 88 | Old Irish | sga | 752 | 88 |
| Church Slavic | chu | 1252 | 124 | Ingrian | izh | 19712 | 64 | Slovenian | slv | 113 | 15 |
| Welsh | cym | 25423 | 401 | Kalaallisut, Greenlandic | kal | 544 | 34 | Northern Sami | sme | 45693 | 3460 |
| Danish | dan | 12040 | 5999 | Kannada | kan | 9 | 3 | Spanish, Castilian | spa | 712070 | 7277 |
| German | deu | 47388 | 5234 | Georgian | kat | 73833 | 3978 | Albanian | sqi | 7307 | 207 |
| Lower Sorbian | dsb | 18844 | 914 | Kazakh | kaz | 1281 | 183 | Swedish | swe | 14891 | 1761 |
| Modern Greek | ell | 4 | 1 | Kabardian | kbd | 56 | 4 | Classic Syriac | syc | 58676 | 1692 |
| English | eng | 74 | 25 | Khakas | kjh | 24 | 6 | Turkmen | tuk | 1092 | 91 |
| Estonian | est | 85200 | 1878 | Latin | lat | 187389 | 13451 | Turkish | tur | 2823 | 883 |
| Basque | eus | 78 | 2 | Latvian | lav | 88841 | 8061 | Ukrainian | ukr | 42 | 3 |
| Faroese | fao | 41816 | 3446 | Lithuanian | lit | 29932 | 1497 | Urdu | urd | 722 | 223 |
| Persian | fas | 10668 | 94 | Livonian languages | liv | 412 | 289 | Veps | vep | 12300 | 820 |
| Finnish | fin | 3046391 | 94609 | Macedonian | mkd | 39805 | 4881 | Votic | vot | 528 | 66 |
| Middle French | frm | 632 | 34 | Maltese | mlt | 64 | 36 | Classical Armenian | xcl | 4981 | 566 |
| Old French | fro | 15 | 3 | Neapolitan | nap | 108 | 36 | **TOTAL** | | **5410746** | **216624** |

Table 3: The languages and sizes of our corpus, created by the intersection of the Wikinflection and UniMorph corpora.

| Word | Template | Features | POS | Prefix | Suffix | Infix | Stem |
|---|---|---|---|---|---|---|---|
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreiendo | es-conj-ír | VerbForm=Ger | VERB | - | iendo | - | sofre |
| sofreiendo | es-conj-ír | VerbForm=Ger | VERB | - | iendo | - | sofre |
| sofreiendo | es-conj-ír | VerbForm=Ger | VERB | - | iendo | - | sofre |
| sofreiendo | es-conj-ír | VerbForm=Ger | VERB | - | iendo | - | sofre |
| sofreiendo | es-conj-ír | VerbForm=Ger | VERB | - | iendo | - | sofre |
| sofreído | es-conj-ír | VerbForm=Ger;Number=Sing | VERB | - | ído | - | sofre |
| sofreído | es-conj-ír | Number=Sing | VERB | - | ído | - | sofre |
| sofreída | es-conj-ír | Number=Sing | VERB | - | ída | - | sofre |
| sofreída | es-conj-ír | Number=Sing | VERB | - | ída | - | sofre |
| sofreídos | es-conj-ír | VerbForm=Ger;Number=Plur | VERB | - | ídos | - | sofre |
| sofreídos | es-conj-ír | Number=Plur | VERB | - | ídos | - | sofre |
| sofreídas | es-conj-ír | Number=Plur | VERB | - | ídas | - | sofre |
| sofreídas | es-conj-ír | Number=Plur | VERB | - | ídas | - | sofre |
| sofreo | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Tense=Pres | VERB | - | o | - | sofre |
| sofrees | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Pres | VERB | - | es | - | sofre |
| sofreís | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Pres | VERB | - | ís | - | sofre |
| sofree | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Tense=Pres | VERB | - | e | - | sofre |
| sofreímos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Pres | VERB | - | ímos | - | sofre |
| sofreís | es-conj-ír | Number=Plur;Mood=Ind;Tense=Pres | VERB | - | ís | - | sofre |
| sofreen | es-conj-ír | Number=Plur;Mood=Ind;Tense=Pres | VERB | - | en | - | sofre |
| sofreía | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ía | - | sofre |
| sofreías | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ías | - | sofre |
| sofreía | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ía | - | sofre |
| sofreíamos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | íamos | - | sofre |
| sofreíais | es-conj-ír | Number=Plur;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | íais | - | sofre |
| sofreían | es-conj-ír | Number=Plur;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ían | - | sofre |
| sofreí | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Tense=Past | VERB | - | í | - | sofre |
| sofreíste | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Past | VERB | - | íste | - | sofre |
| sofreió | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Tense=Past | VERB | - | ió | - | sofre |
| sofreímos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Past | VERB | - | ímos | - | sofre |
| sofreísteis | es-conj-ír | Number=Plur;Mood=Ind;Tense=Past | VERB | - | ísteis | - | sofre |
| sofreieron | es-conj-ír | Number=Plur;Mood=Ind;Tense=Past | VERB | - | ieron | - | sofre |
| sofreíré | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Tense=Fut | VERB | - | iré | - | sofre |
| sofreírás | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Fut | VERB | - | irás | - | sofre |
| sofreírá | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Tense=Fut | VERB | - | irá | - | sofre |
| sofreíremos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Fut | VERB | - | iremos | - | sofre |
| sofreíréis | es-conj-ír | Number=Plur;Mood=Ind;Tense=Fut | VERB | - | iréis | - | sofre |
| sofreírán | es-conj-ír | Number=Plur;Mood=Ind;Tense=Fut | VERB | - | irán | - | sofre |
| sofreíría | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Cnd | VERB | - | iría | - | sofre |
| sofreírías | es-conj-ír | Number=Sing;Person=1;Mood=Cnd | VERB | - | irías | - | sofre |
| sofreíría | es-conj-ír | Number=Sing;Person=2;Mood=Cnd | VERB | - | iría | - | sofre |
| sofreíríamos | es-conj-ír | Number=Plur;Person=3;Mood=Cnd | VERB | - | iríamos | - | sofre |
| sofreíríais | es-conj-ír | Number=Plur;Mood=Cnd | VERB | - | iríais | - | sofre |
| sofreírían | es-conj-ír | Number=Plur;Mood=Cnd | VERB | - | irían | - | sofre |
| sofrea | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Sub;Tense=Pres | VERB | - | a | - | sofre |
| sofreas | es-conj-ír | Number=Sing;Person=1;Mood=Sub;Tense=Pres | VERB | - | as | - | sofre |
| sofreásvos | es-conj-ír | Number=Sing;Person=1;Mood=Sub;Tense=Pres | VERB | - | ásvos2 | - | sofr |
| sofrea | es-conj-ír | Number=Sing;Person=2;Mood=Sub;Tense=Pres | VERB | - | a | - | sofre |
| sofreamos | es-conj-ír | Number=Plur;Person=3;Mood=Sub;Tense=Pres | VERB | - | amos | - | sofre |
| sofreáis | es-conj-ír | Number=Plur;Mood=Sub;Tense=Pres | VERB | - | áis | - | sofre |
| sofrean | es-conj-ír | Number=Plur;Mood=Sub;Tense=Pres | VERB | - | an | - | sofre |
| sofreiera | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iera | - | sofre |
| sofreieras | es-conj-ír | Number=Sing;Person=1;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | ieras | - | sofre |
| sofreiera | es-conj-ír | Number=Sing;Person=2;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iera | - | sofre |
| sofreiéramos | es-conj-ír | Number=Plur;Person=3;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iéramos | - | sofre |
| sofreierais | es-conj-ír | Number=Plur;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | ierais | - | sofre |
| sofreieran | es-conj-ír | Number=Plur;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | ieran | - | sofre |
| sofreiese | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iese | - | sofre |
| sofreieses | es-conj-ír | Number=Sing;Person=1;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | ieses | - | sofre |
| sofreiese | es-conj-ír | Number=Sing;Person=2;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iese | - | sofre |
| sofreiésemos | es-conj-ír | Number=Plur;Person=3;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iésemos | - | sofre |
| sofreieseis | es-conj-ír | Number=Plur;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | ieseis | - | sofre |
| sofreiesen | es-conj-ír | Number=Plur;Mood=Sub;Aspect=Imp;Tense=Imp | VERB | - | iesen | - | sofre |
| sofreiere | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Sub | VERB | - | iere | - | sofre |
| sofreieres | es-conj-ír | Number=Sing;Person=1;Mood=Sub | VERB | - | ieres | - | sofre |
| sofreiere | es-conj-ír | Number=Sing;Person=2;Mood=Sub | VERB | - | iere | - | sofre |
| sofreiéremos | es-conj-ír | Number=Plur;Person=3;Mood=Sub | VERB | - | iéremos | - | sofre |
| sofreiereis | es-conj-ír | Number=Plur;Mood=Sub | VERB | - | iereis | - | sofre |
| sofreieren | es-conj-ír | Number=Plur;Mood=Sub | VERB | - | ieren | - | sofre |
| sofree | es-conj-ír | Number=Sing;Person=1;Mood=Imp;Polarity=Pos | VERB | - | e | - | sofre |
| sofreí | es-conj-ír | Number=Sing;Person=1;Mood=Imp;Polarity=Pos | VERB | - | í | - | sofre |
| sofrea | es-conj-ír | Number=Sing;Person=2;Mood=Imp;Polarity=Pos | VERB | - | a | - | sofre |
| sofreamos | es-conj-ír | Number=Plur;Person=3;Mood=Imp;Polarity=Pos | VERB | - | amos | - | sofre |
| sofreíd | es-conj-ír | Number=Plur;Mood=Imp;Polarity=Pos | VERB | - | íd | - | sofre |
| sofrean | es-conj-ír | Number=Plur;Mood=Imp;Polarity=Pos | VERB | - | an | - | sofre |
| no sofreas | es-conj-ír | Number=Sing;Person=1;Mood=Imp;Polarity=Neg | VERB | no | as | - | sofre |
| no sofrea | es-conj-ír | Number=Sing;Person=2;Mood=Imp;Polarity=Neg | VERB | no | a | - | sofre |
| no sofreamos | es-conj-ír | Number=Plur;Person=3;Mood=Imp;Polarity=Neg | VERB | no | amos | - | sofre |
| no sofreáis | es-conj-ír | Number=Plur;Mood=Imp;Polarity=Neg | VERB | no | áis | - | sofre |
| no sofrean | es-conj-ír | Number=Plur;Mood=Imp;Polarity=Neg | VERB | no | an | - | sofre |

Table 4: The lemma *sofreír* in non-evaluated Wikinflection.

| Lemma | Word | Features |
|---|---|---|
| sofreír | no sofriáis | V;NEG;IMP;2;PL |
| sofreír | no sofriamos | V;NEG;IMP;1;PL |
| sofreír | no sofrían | V;NEG;IMP;3;PL |
| sofreír | no sofrías | V;NEG;IMP;2;SG |
| sofreír | no sofría | V;NEG;IMP;3;SG |
| sofreír | sofreíais | V;IND;PST;2;PL;IPFV |
| sofreír | sofreíamos | V;IND;PST;1;PL;IPFV |
| sofreír | sofreían | V;IND;PST;3;PL;IPFV |
| sofreír | sofreías | V;IND;PST;2;SG;IPFV |
| sofreír | sofreía | V;IND;PST;1;SG;IPFV |
| sofreír | sofreía | V;IND;PST;3;SG;IPFV |
| sofreír | sofreídas | V.PTCP;PST;FEM;PL |
| sofreír | sofreída | V.PTCP;PST;FEM;SG |
| sofreír | sofreídos | V.PTCP;PST;MASC;PL |
| sofreír | sofreído | V.PTCP;PST;MASC;SG |
| sofreír | sofreíd | V;POS;IMP;2;PL |
| sofreír | sofreímos | V;IND;PRS;1;PL |
| sofreír | sofreímos | V;IND;PST;1;PL;PFV |
| sofreír | sofreírán | V;IND;FUT;3;PL |
| sofreír | sofreírás | V;IND;FUT;2;SG |
| sofreír | sofreírá | V;IND;FUT;3;SG |
| sofreír | sofreíréis | V;IND;FUT;2;PL |
| sofreír | sofreíremos | V;IND;FUT;1;PL |
| sofreír | sofreíré | V;IND;FUT;1;SG |
| sofreír | sofreíríais | V;COND;2;PL |
| sofreír | sofreíríamos | V;COND;1;PL |
| sofreír | sofreírían | V;COND;3;PL |
| sofreír | sofreírías | V;COND;2;SG |
| sofreír | sofreíría | V;COND;1;SG |
| sofreír | sofreíría | V;COND;3;SG |
| sofreír | sofreír | V;NFIN |
| sofreír | sofreísteis | V;IND;PST;2;PL;PFV |
| sofreír | sofreíste | V;IND;PST;2;SG;PFV |
| sofreír | sofreís | V;IND;PRS;2;PL |
| sofreír | sofreí | V;IND;PST;1;SG;PFV |
| sofreír | sofriáis | V;SBJV;PRS;2;PL |
| sofreír | sofriamos | V;POS;IMP;1;PL |
| sofreír | sofriamos | V;SBJV;PRS;1;PL |
| sofreír | sofrían | V;POS;IMP;3;PL |
| sofreír | sofrían | V;SBJV;PRS;3;PL |
| sofreír | sofrías | V;SBJV;PRS;2;SG |
| sofreír | sofría | V;POS;IMP;3;SG |
| sofreír | sofría | V;SBJV;PRS;1;SG |
| sofreír | sofría | V;SBJV;PRS;3;SG |
| sofreír | sofriendo | V.CVB;PRS |
| sofreír | sofrién | V;IND;PRS;3;PL |
| sofreír | sofrierais | V;SBJV;PST;2;PL;LGSPEC1 |
| sofreír | sofriéramos | V;SBJV;PST;1;PL;LGSPEC1 |
| sofreír | sofrieran | V;SBJV;PST;3;PL;LGSPEC1 |
| sofreír | sofrieras | V;SBJV;PST;2;SG;LGSPEC1 |
| sofreír | sofriera | V;SBJV;PST;1;SG;LGSPEC1 |
| sofreír | sofriera | V;SBJV;PST;3;SG;LGSPEC1 |
| sofreír | sofriereis | V;SBJV;FUT;2;PL |
| sofreír | sofriéremos | V;SBJV;FUT;1;PL |
| sofreír | sofrieren | V;SBJV;FUT;3;PL |
| sofreír | sofrieres | V;SBJV;FUT;2;SG |
| sofreír | sofriere | V;SBJV;FUT;1;SG |
| sofreír | sofriere | V;SBJV;FUT;3;SG |
| sofreír | sofrieron | V;IND;PST;3;PL;PFV |
| sofreír | sofrieseis | V;SBJV;PST;2;PL |
| sofreír | sofriésemos | V;SBJV;PST;1;PL |
| sofreír | sofriesen | V;SBJV;PST;3;PL |
| sofreír | sofrieses | V;SBJV;PST;2;SG |
| sofreír | sofriese | V;SBJV;PST;1;SG |
| sofreír | sofriese | V;SBJV;PST;3;SG |
| sofreír | sofríes | V;IND;PRS;2;SG |
| sofreír | sofríe | V;IND;PRS;3;SG |
| sofreír | sofríe | V;POS;IMP;2;SG |
| sofreír | sofrío | V;IND;PRS;1;SG |
| sofreír | sofrió | V;IND;PST;3;SG;PFV |

Table 5: The lemma *sofreír* in UniMorph.

| Word | Template | Features | POS | Prefix | Suffix | Infix | Stem |
|---|---|---|---|---|---|---|---|
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreído | es-conj-ír | VerbForm=Ger;Number=Sing | VERB | - | ído | - | sofre |
| sofreído | es-conj-ír | Number=Sing | VERB | - | ído | - | sofre |
| sofreís | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Pres | VERB | - | ís | - | sofre |
| sofreímos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Pres | VERB | - | ímos | - | sofre |
| sofreís | es-conj-ír | Number=Plur;Mood=Ind;Tense=Pres | VERB | - | ís | - | sofre |
| sofreía | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ía | - | sofre |
| sofreías | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ías | - | sofre |
| sofreía | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ía | - | sofre |
| sofreíamos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | íamos | - | sofre |
| sofreíais | es-conj-ír | Number=Plur;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | íais | - | sofre |
| sofreían | es-conj-ír | Number=Plur;Mood=Ind;Aspect=Imp;Tense=Imp | VERB | - | ían | - | sofre |
| sofreí | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Tense=Past | VERB | - | í | - | sofre |
| sofreíste | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Past | VERB | - | íste | - | sofre |
| sofreímos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Past | VERB | - | ímos | - | sofre |
| sofreísteis | es-conj-ír | Number=Plur;Mood=Ind;Tense=Past | VERB | - | ísteis | - | sofre |
| sofreíré | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Ind;Tense=Fut | VERB | - | iré | - | sofre |
| sofreírás | es-conj-ír | Number=Sing;Person=1;Mood=Ind;Tense=Fut | VERB | - | irás | - | sofre |
| sofreírá | es-conj-ír | Number=Sing;Person=2;Mood=Ind;Tense=Fut | VERB | - | irá | - | sofre |
| sofreíremos | es-conj-ír | Number=Plur;Person=3;Mood=Ind;Tense=Fut | VERB | - | iremos | - | sofre |
| sofreíréis | es-conj-ír | Number=Plur;Mood=Ind;Tense=Fut | VERB | - | iréis | - | sofre |
| sofreírán | es-conj-ír | Number=Plur;Mood=Ind;Tense=Fut | VERB | - | irán | - | sofre |
| sofreíría | es-conj-ír | VerbForm=Ger;Number=Sing;Person=3;Mood=Cnd | VERB | - | iría | - | sofre |
| sofreírías | es-conj-ír | Number=Sing;Person=1;Mood=Cnd | VERB | - | irías | - | sofre |
| sofreíría | es-conj-ír | Number=Sing;Person=2;Mood=Cnd | VERB | - | iría | - | sofre |
| sofreíríamos | es-conj-ír | Number=Plur;Person=3;Mood=Cnd | VERB | - | iríamos | - | sofre |
| sofreíríais | es-conj-ír | Number=Plur;Mood=Cnd | VERB | - | iríais | - | sofre |
| sofreírían | es-conj-ír | Number=Plur;Mood=Cnd | VERB | - | irían | - | sofre |
| sofreí | es-conj-ír | Number=Sing;Person=1;Mood=Imp;Polarity=Pos | VERB | - | í | - | sofre |
| sofreíd | es-conj-ír | Number=Plur;Mood=Imp;Polarity=Pos | VERB | - | íd | - | sofre |

Table 6: The lemma *sofreír* in Wiktionary-evaluated Wikinflection.

| Word | Template | Features | POS | Prefix | Suffix | Infix | Stem |
|---|---|---|---|---|---|---|---|
| sofreír | es-conj-ír | VerbForm=Inf | VERB | - | ír | - | sofre |
| sofreído | es-conj-ír | Tense=Past;Gender=Masc;Number=Sing | VERB | - | ído | - | sofre |
| sofreída | es-conj-ír | Tense=Past;Gender=Fem;Number=Sing | VERB | - | ída | - | sofre |
| sofreídos | es-conj-ír | Tense=Past;Gender=Masc;Number=Plur | VERB | - | ídos | - | sofre |
| sofreídas | es-conj-ír | Tense=Past;Gender=Fem;Number=Plur | VERB | - | ídas | - | sofre |
| sofreís | es-conj-ír | Mood=Ind;Tense=Pres;Person=2;Number=Plur | VERB | - | ís | - | sofre |
| sofreímos | es-conj-ír | Mood=Ind;Tense=Past;Person=1;Number=Plur;Aspect=Perf | VERB | - | ímos | - | sofre |
| sofreía | es-conj-ír | Mood=Ind;Tense=Past;Person=3;Number=Sing;Aspect=Imp | VERB | - | ía | - | sofre |
| sofreías | es-conj-ír | Mood=Ind;Tense=Past;Person=2;Number=Sing;Aspect=Imp | VERB | - | ías | - | sofre |
| sofreíamos | es-conj-ír | Mood=Ind;Tense=Past;Person=1;Number=Plur;Aspect=Imp | VERB | - | íamos | - | sofre |
| sofreíais | es-conj-ír | Mood=Ind;Tense=Past;Person=2;Number=Plur;Aspect=Imp | VERB | - | íais | - | sofre |
| sofreían | es-conj-ír | Mood=Ind;Tense=Past;Person=3;Number=Plur;Aspect=Imp | VERB | - | ían | - | sofre |
| sofreí | es-conj-ír | Mood=Ind;Tense=Past;Person=1;Number=Sing;Aspect=Perf | VERB | - | í | - | sofre |
| sofreíste | es-conj-ír | Mood=Ind;Tense=Past;Person=2;Number=Sing;Aspect=Perf | VERB | - | íste | - | sofre |
| sofreísteis | es-conj-ír | Mood=Ind;Tense=Past;Person=2;Number=Plur;Aspect=Perf | VERB | - | ísteis | - | sofre |
| sofreiré | es-conj-ír | Mood=Ind;Tense=Fut;Person=1;Number=Sing | VERB | - | iré | - | sofre |
| sofreirás | es-conj-ír | Mood=Ind;Tense=Fut;Person=2;Number=Sing | VERB | - | irás | - | sofre |
| sofreirá | es-conj-ír | Mood=Ind;Tense=Fut;Person=3;Number=Sing | VERB | - | irá | - | sofre |
| sofreiremos | es-conj-ír | Mood=Ind;Tense=Fut;Person=1;Number=Plur | VERB | - | iremos | - | sofre |
| sofreiréis | es-conj-ír | Mood=Ind;Tense=Fut;Person=2;Number=Plur | VERB | - | iréis | - | sofre |
| sofreirán | es-conj-ír | Mood=Ind;Tense=Fut;Person=3;Number=Plur | VERB | - | irán | - | sofre |
| sofreiría | es-conj-ír | Mood=Cnd;Person=3;Number=Sing | VERB | - | iría | - | sofre |
| sofreirías | es-conj-ír | Mood=Cnd;Person=2;Number=Sing | VERB | - | irías | - | sofre |
| sofreiríamos | es-conj-ír | Mood=Cnd;Person=1;Number=Plur | VERB | - | iríamos | - | sofre |
| sofreiríais | es-conj-ír | Mood=Cnd;Person=2;Number=Plur | VERB | - | iríais | - | sofre |
| sofreirían | es-conj-ír | Mood=Cnd;Person=3;Number=Plur | VERB | - | irían | - | sofre |
| sofreíd | es-conj-ír | Polarity=Pos;Mood=Jus;Person=2;Number=Plur | VERB | - | íd | - | sofre |

Table 7: The lemma *sofreír* in UniMorph-evaluated Wikinflection.