

# Verb Stems and Principal Parts

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Just about every word in Greek (and in the other Indo-European languages) is formed from a *root* to which are added various *affixes*. This process can be seen quite clearly in Greek verbs. Given a root, there are various *suffixes* and occasional *infixes* or *prefixes* that make up the *stems*. Given a stem, add *inflectional endings* to make the various forms in actual use.

For example:

λύω, *loose, release*, has root λύ-. The present stem for this verb is just the root, with no suffix or infix. Add an inflectional ending, say the third person singular ending of the primary active set, and you get the verb form λύει, *he/she/it looses*.

The aorist stem for this verb is the root λύ- plus the suffix -σ-, making λύσ-. Add an inflectional ending, say the one for making aorist active infinitives, and you get the verb form λύσαι, *to loose, to have loosed*.

The stem-forming suffixes are often predictable: many verbs form their stems in the same ways. For example, many verbs add -σ- to the present stem to form the future stem (as λύσω), and many verbs add -σ- to form the aorist stem (as ἔλυσα). But this is a tendency, not a rule: you need to learn all the stems for each verb, because they might not be what you expect.

That's where **principal parts** come in. The principal parts of a word are a standard set of forms from which you can determine the stems. For a Greek verb, the principal parts are:

- first person singular, present indicative active
- first person singular, future indicative active
- first person singular, aorist indicative active
- first person singular, perfect indicative active
- first person singular, perfect indicative middle and passive
- first person singular, aorist indicative passive

For a Greek noun, the principal parts are nominative singular, genitive singular, and definite article. For a Greek adjective, they are masculine,

part	stem	tenses	moods	voices
I	present	present, imperfect	all	all
II	future active	future	all	active, middle
III	aorist active	aorist	all	active, middle
IV	perfect active	perfect, pluperfect, future perfect	all	active
V	perfect middle	perfect, pluperfect, future perfect	all	middle, passive
VI	aorist passive	aorist, future	all	passive

Table 1: Which forms come from which stems

feminine, and neuter nominative singular. There are similar conventions in other languages as well: for an English verb, for example, the principal parts are the present infinitive, preterite, and past participle, as *sing, sang, sung* or *love, loved, loved*.

Every form of a Greek verb is inflected from a stem, and every stem comes from one of these principal parts. To form the stem from the principal part, remove the first person singular inflectional ending (including undoing any consonant assimilation), and remove the augment if there is one. The third and sixth principal parts, the aorist forms, will have augment; the rest will not.

A Greek verb therefore has six stems, one from each principal part. The various tenses and moods are formed from those stems, as shown in the table.

Note that if *any* mood of a given tense is formed from a given stem, *all* its moods are. That is, whatever stem you use for the indicative in some tense and voice, you will also use for the imperative, infinitive, participle, subjunctive, and optative of that tense and voice.

Here are the principal parts for some exemplary verbs.

- λύω, λύσω, ἔλυσα, λέλυκα, λέλυμαι, ἐλύθη
- λείπω, λείψω, ἔλιπον, λέλοιπα, λέλειμμα, ἐλείφθη
- πέμπω, πέμψω, ἔπεμψα, πέπομφα, πέπεμαι, ἐπέμφθη
- ποιέω, ποιήσω, ἐποίησα, πεποίηκα, πεποίημαι, ἐποιήθη
- δηλόω, δηλώσω, ἐδήλωσα, δεδήλωκα, δεδήλωμαι, ἐδηλώθη
- τιμάω, τιμήσω, ἐτίμησα, τετίμηκα, τετίμημαι, ἐτιμήθη
- βάλλω, βαλῶ, ἔβαλον, βέβληκα, βέβλημαι, ἐβλήθη
- λαμβάνω, λήψομαι, ἔλαβον, εἴληφα, εἴλημαι, ἐλήφθη
- δίδωμι, δώσω, ἔδωκα, δέδωκα, δέδομαι, ἐδόθη

Note the following general tendencies:

The *future* stem is often formed with the suffix  $-\sigma-$ . For contract verbs, the last vowel of the root is lengthened before this suffix is added (and before the other suffixes are added, too). Many verbs have a future middle instead of a future active. Many verbs whose root ends in a liquid consonant have contract futures, always  $\varepsilon$ -contracts.

The *aorist active* stem is usually formed with the suffix  $-\sigma-$ . Many verbs have “second aorist” forms instead, and in this case the root may lose a vowel: if the root contains an  $\varepsilon$  or an  $o$ , that vowel may disappear in the second aorist form. This is called “zero grade” of the root vowel.

The *perfect active* stem might be formed with the suffix  $-\chi-$  or with aspiration of the final consonant of the root. The perfect frequently also has reduplication of the first consonant; that is, a new syllable is added at the start of the word, consisting of the first consonant of the root and the vowel  $\varepsilon$ . When the root contains an  $\varepsilon$ , the perfect frequently has an  $o$  instead. This is called “O grade” of the root vowel.

The *perfect middle* stem generally has reduplication if the perfect active stem does. It usually has E grade of the vowel, even if the perfect active has O grade. Often there is no suffix at all. Note that the final consonant of the root may be assimilated to the first consonant of the inflectional ending.

The *aorist passive* stem is usually formed with the suffix  $-\theta-$ . The *future passive* stem is always the aorist passive stem with the additional suffix  $-\sigma-$ , so for example  $\lambda\upsilon\theta\eta\sigma-$  from the aorist passive stem  $\lambda\upsilon\theta\eta-$  of  $\lambda\upsilon\omega$ , giving  $\lambda\upsilon\theta\eta\sigma\omicron\mu\alpha\iota$ , *I shall be released*.

The present may also have affixes. In  $\delta\acute{\iota}\delta\omega\mu\iota$ , the root is  $\delta\omega-$ , and the present stem shows reduplication; many athematic verbs ( $\mu\iota$ -verbs) do this. In  $\lambda\alpha\mu\beta\acute{\alpha}\nu\omega$ , the root is  $\lambda\alpha\beta-$ , and the present shows a nasal infix (the  $\mu$  inside the root syllable) plus the suffix  $-\alpha\nu-$ . There are other verbs that have both a nasal consonant infix into their roots and a nasal suffix added, for example  $\theta\iota\gamma\gamma\acute{\alpha}\nu\omega$ , whose root is  $\theta\iota\gamma-$ .

But these are only general tendencies. An individual verb might be quite different. The most obvious example is  $\phi\acute{\epsilon}\rho\omega$ ,  $\acute{\omicron}\sigma\omega$ ,  $\eta\gamma\epsilon\gamma\chi\alpha$ ,  $\acute{\epsilon}\nu\eta\gamma\chi\alpha$ ,  $\acute{\epsilon}\nu\eta\gamma\epsilon\gamma\mu\alpha\iota$ ,  $\eta\gamma\acute{\epsilon}\chi\theta\eta\nu$ , which has three totally different roots, one in the present, one in the future active and middle, and one for everything else.

Nonetheless, given the principal parts, you can form the stems, and given the stems, you can form the inflected forms. Conversely, given an inflected form, you can extract its stem, and given the stem, you can recognize the root. If the root for this stem is not the same as the root for the present active stem (as is the case, for example, with forms from  $\phi\acute{\epsilon}\rho\omega$ ), a good lexicon will often have an entry for the root or for the principal part formed from it.