Greek Morphology Memorisation

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Aim - memorising the shape of the language

This document aims to present everything that needs to be memorised for the morphology of Greek 1 at Moore College, with the aim of keeping the amount of material to an absolute minimum. It is written for the mathematically-minded, who prefer to work things out from first principles. Hence the language is presented, as much as possible, as a system with exceptions. The student needs to learn the system (ie rules and paradigms) and the exceptions.

Things that do not actually have to be memorised, but are simply there for illustrative purposes to fill out the tables, are in faint type.

The Greek font, TekniaGreek, is available for download at http://www.teknia.com/ .

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General morphology

Consonants

Stops and aspirates with sigma

	Voiced stop	Unvoiced stop	Aspirate	+ s =
Labial	b	p	f	y
Guttural	g	k	c	x
Dental	d	t	q	s

Stops and aspirates with theta

	Voiced stop	Unvoiced stop	Aspirate	+ q =
Labial	b	p	f	fq
Guttural	g	k	c	cq
Dental	d	t	q	sq

Liquids with sigma

Any of the liquids (l, m, n, r) followed by sigma:

- changes the following letters (so it is no longer followed by sigma)
- often changes the preceding letters (especially lengthening preceding vowel)

Common occurrence	Before change	After change
Aorist tense	…liquid + sa + CV + Ending	…liquid + a + CV + Ending
Future tense	…liquid + s + CV + Ending	…liquid + e(s) + CV + Ending
Various	stem + o + n(t)s…	stem + ou + s…
Various	stem + e + n(t)s…	stem + ei + s…

Other rules

Letter	Position	Action
s	between two vowels	usually disappears.
t	at the end of a word	disappears
n	at the end of a word	is often movable

Vowel contraction

Vowel contraction occurs when two vowels or a vowel plus a diphthong come together.

How to read the table:

- There are nine numbered rules
- "E" means this rule is really an exception to the following rule, ie the contraction is shorter than expected because the sound is common
- *x*, *y* and *z* are used as generic vowels

How to apply the rules:

- Keep applying contraction rules until you get a vowel or diphthong, eg
- If two rules conflict, then the lower-numbered rule takes precedence

Vowel + vowel (rules 1-6)

Rule #	Explanation	Before contraction	After contraction
1	ι subscripts if required	wι, hι	w/h/
E2 (to 3)	For 3 common sounds, w shortens to ou	oo, eo, oe	(w) → ou
3	o/w dominates all and becomes long w	[o or w]*x* *x*[o or w]	w
4	Initial a dominates	a*x*	a
E5 (to 6)	For one common sound, h shortens to ei	ee	(h) → ei
6	initial e/h dominates and becomes long h	[e or h]*x*	h

Vowel + diphthong (rules 7-9)

Rule #	Explanation	Before contraction	After contraction
7	Spurious* diphthongs drop second letter	*x* + *yz* (*yz* spurious)	*xy*
E8 (to 9)	For 4 common sounds, w/ou shortens to o	oei eoi ooi oh/(often)	(wι) → oi
9	The initial vowel and first letter of the diphthong contract. The ι at the end: 1. subscripts if possible (if *xy* → a, h, w) 2. stays in place if possible (if *xy* → e, ι, u) 3. drops out otherwise (if *xy* → diphthong)	*x* + *y*ι *x* + *y*ι	*xy* + ι

*"Spurious" = formed by contraction.
There are two cases: ei (sometimes spurious), ou (always spurious)

Nouns

The article

P	C	G M	G F	G N
S	N	oJ	hJ	to
	G	tou	thV	tou
	D	tw/	th/	tw/
	A	ton	thn	to
P	N	oiJ	aiJ	ta
	G	twn	twn	twn
	D	toiV	taiV	toiV
	A	touV	taV	ta

The noun system

Declensions

Declension	Stem ending
1	a, h
2	o
3	consonant

Neuter case ending rules

Neuter …	Rule
accusative	Same as nominative
genitive, dative	Same as masculine genitive, dative
plural	(Almost) always ends in a

Master case ending chart

NB an underscore means that the last letter of the stem is removed.

		2 m	1 m / f	2 n		3 m / f	3 n
s	n	V	V -	n	m/f same as 1 →	V/-	-
	g	o→u	ou V	o→u	combines →	oV	oV
	d	i	i	i	← tries to subscript →	i	i
	a	n	n	n		a/n	-
	v	e	a -			-	
p	n	i	i	a		eV	a
	g	wn	wn	wn	← always same →	wn	wn
	d	iV	iV	iV	flips →	si(n)	si(n)
	a	nV→uV	V	a		aV	a

Stem shift rules

		2 m	1 m / f	2 n		3 m / f	3 n
s	n						
	g		-*x*h → -*x*a		← Final stem vowel lengthens if possible	-î→-e if followed by vowel	
	d		if *x* is not e, i or r				
	a						
	v						
p	n						
	g		-h → -a				
	d					(-î→-e always)	
	a						

Irregular declensions

1st and 2nd declension

Only lexical form and deviations from the master case ending chart are shown

Decl:		1	2	2	2-1-2		2-1-2	
Gend:		m	m	n	m	n	m	n
Stem:		-[not e, i, r]a	-ou	sabbato	pollo		megalo	
S	**N**	=Iouda-V	=Ihsou-V	sabbaton	poluV	polu	mega-V	mega-
	G	=Iouda-	=Ihsou-	sabbatou	pollou	pollou	megalou	megalou
	D		=Ihsou-					
	A				polun	polu	mega-n	mega-
	V		=Ihsou-					
P	**N**							
	G							
	D			sabbasin				
	A							

3rd declension nouns (see below for adjectives)

For third declension nouns, use the genitive singular (lexical entry) to determine the stem. The nominative singular may vary considerably.

Gender:		m/f	m/f	m	f	n
Stem:		pater mater qugater	-u	-e		
eg:		pater	icqu	basile	pole	gene
S	**N**	pathr	icquV	basileuV	poliV	genoV
	G	pat-roV	icquoV	basilewV	polewV	genouV
	D	pat-ri	icqui&	basilei	polei	genei
	A	patera	icqun	basilea	polin	genoV
P	**N**	patereV	icqueV	basileiV	poleiV	genh
	G	paterwn	icquwn	basilewn	polewn	gen-wn
	D	pat-rasi(n)	icqusi(n)	basileusi(n)	polesi(n)	genesi(n)
	A	pateraV	icquaV	basileiV	poleiV	genh

Adjectives, adverbs, pronouns, demonstratives

Adjectives

First declension feminine stem rule

The stem is either
1. [e, i, r]-a, or
2. [other]-h

3-3 adjectives – major patterns

Stem:	-liquid		-e	
Gender:	**m/f**	**n**	**m/f**	**n**
eg:	pleion		aJhqe	
S N	pleiwn	pleion	aJhqhV	aJhqeV
G	pleionoV	pleionoV	aJhqouV	aJhqouV
D	pleioni	pleioni	aJhqei	aJhqei
A	pleiona	pleion	aJhqh	aJqqeV
P N	pleioneV	pleiona	aJhqeiV	aJhqh
G	pleionwn	pleionwn	aJhq-wn	aJhq-wn
D	pleio-si(n)	pleio-si(n)	aJhqesi(n)	aJhqesi(n)
A	pleionaV	pleiona	aJhqeiV	aJhqh

3-1-3 adjectives – major patterns

Stem:	normal			-en		
Gender:	**m**	**f**	**n**	**m**	**f**	**n**
Follows:	normal	stem+sa	normal	eJ	mia	eJ
eg:	pant			eJ		
S N	paV	pasa	pan	eiV	mia	eJ
G	pantoV	pashV	pantoV	eJoV	miaV	eJoV

Adverbs and degrees of comparison

Changes endings:

Degree of comparison	Ending	
	Adjective (2-1-2)	**Adverb (indeclinable)**
Positive	normal	-wV
Comparative	-teroV, -tera, -teron	-teron
Superlative	-tatoV, -tath, -taton	-tata

Exceptions

Only nominative masculine singular is shown

Adjective			Adverb (indeclinable)		
Positive	**Comparative**	**Superlative**	**Positive**	**Comparative**	**Superlative**
sofoV	sofwteroV	sofwtatoV	sofwV	sofwteron	sofwtata
ajjaqoV	kreisswn (3rd)		euj	kreisson	
kakoV	ceipwn (3rd)				
megaV	meizwn (3rd)	megistoV			
poluV	pleiwn (3rd)			mallon	malista
mikroV	mikroteroV	ejacistoV			

Declension of demonstratives and pronouns

Demonstratives and pronouns are declined according to 2-1-2 with the following exceptions

Demonstrative / pronoun	Exceptions		
ekeinoV autoV eautou alloV	nom/acc.sing.neut drop n		
outoV	nom/acc.sing.neut drop n	Initial sound same as article (t or +)	If any o/w sound in ending, first diphthong is ou Otherwise, first diphthong is au
oV	nom/acc.sing.neut drop n	Always has an accent (usu. grave)	

First and second person pronouns

The table shows suffixes, prefixes and exceptions.

					Prefix			
					Singular		**Plural**	
					1ˢᵗ	**2ⁿᵈ**	**1ˢᵗ**	**2ⁿᵈ**
					(ej)m	s	hm	um
Suffix	**Personal**	**Sing.**	**N**	u	egw	su		
			G	ou	(ej)mou	sou		
			D	oi	(ej)moi	soi		
			A	e	(ej)me	se		
		Plu.	**N**	eiV			hmeiV	umeiV
			G	wn			hmwn	umwn
			D	in			hmin	umin
			A	aV			hmaV	umaV
	Reflexive	eautou fully declined			Remove eJ (eg S,F,G emauthV)	eg S,F,G seauthV	No prefix	

Prepositions

Elision

End of preposition	Followed by smooth breathing	Followed by rough breathing
peri, pro	stays same	stays same
-p-vowel	-p=	-f=
-t-vowel	-t=	-q=
-other consonant-vowel	drop vowel	drop vowel
-k	-x	-x

Verbs

Types of tense

Tense type	Tenses
Past	Imperfect, Aorist, Pluperfect (indicative only)
Complete	Perfect, Pluperfect

Elements of a verb

Element	When present
Preposition	Compound verbs
Augment	Past tenses (indicative only)
Reduplication	Complete tenses
Tense stem	See below
Tense formative	See verb table
Connecting vowel	See verb table
(Participle morpheme)	Participles
Personal ending	See below (non-participles)
(Case ending)	Participles

Augment & Reduplication

Tense stem begins with	Augment	Reduplication
Double consonant	ej	
Aspirated consonant	ej	Corresponding unvoiced stop + e
Other (single) Consonant	ej	Consonant + e
a	a → h	
e	e → h	
o	o → w	
Other	-	

Contract vowel

Contract vowel followed by	Action	Using rules
Connecting vowel	Contracts	Contract
Consonant	Lengthens	Augment

Connecting vowel

Personal ending begins with	Connecting vowel (most moods)	Subjunctive mood (longer)
- (1st sing prim act)	o → w (lengthens to compensate)	w
- (3rd sing sec act)	e	h
m, n	o	w
other	e	h

Personal endings

		Indicative & Subjunctive				Imperative	Infinitive
		Primary		**Secondary** (Ind. past tenses only)			
		Ending	**Alternate**	**Ending**	**Alternate**		
Active							
Singular	1st	-	mi	n		-	nai
	2nd	V		V		Varies	
	3rd	i	si(n)	-(n)		tw	
Plural	1st	men		men		-	
	2nd	te		te		te	
	3rd	nsi(n)	asi(n)	n	sa(n)	twsan	
Middle/Passive							
Singular	1st	mai		mhn		-	sqai
	2nd	sai		so		Varies	
	3rd	tai		to		sqw	
Plural	1st	meqa		meqa		-	
	2nd	sqa		sqa		sqe	
	3rd	ntai		nto		sqwsan	

Second aorist active/middle

Tense stem: Aorist
Other elements: Same as imperfect

Athematic (-mi) verbs

These verbs follow the rules outlined above, with the following exceptions:

Element	Situation	Change
Tense stem	Present	Forms by reduplication using i
	All	Final stem vowel can lengthen, shorten or drop out
	Pres act ind sing	Final stem vowel lengthens
Tense formative	Aorist	Often ka
Connecting vowel	All	None
Personal ending	Pres act ind	Alternate endings
	2aor act imp 2nd sing	Ending is V
	Non-indicative moods	Always second aorist

"To be"

Indicative

		Present	Imperfect	Future
S	1st	eimi	hmhn	esomai
	2nd	ei\	hV or hsqa	esh/
	3rd	esti(n)	hn	estai
P	1st	esmen	hmen or hmeqa	esomeqa
	2nd	este	hte	esesqa
	3rd	eisi(n)	hsan	esontai

Infinitive

einai

Other moods

For subjunctive and participle, simply use the regular endings (as if there is no stem)

Tense stems

Present tense stem: effect of consonantal iota

NB The consonantal iota is not always present

Root ends in	Present tense stem ends in	eg root → present tense
l	ll	bal → ballw
r	ir	ar → airw
d	z	baptid → baptizw
g	ss	khrug → khrussw

Some irregular tense stems and deponents – principal parts

If two roots are listed, the first root applies to present, future and aorist active while the second to the other three.
A tense in brackets underneath a principal part means that this form takes another meaning.

Root	Present	Future	Aorist Act	Perf Act	Perf Pass	Aor Pass
aggel	aggellw	aggelw	hggeila	hggelka	hggelmai	hggel-hn
ag	agw	axw	hgagon	-	hgmai	hcqhn
akou	akouw	akousw	hkousa	akhko-a	-	hkousqhn
amarta	amartanw	amarthsw	hmart-on	hmarthka	-	-
anoig	anoigw	anoixw	hnoixa	anewg-a	anewgmai	hnoicqhn
bal/blh	ballw	balw	ebalon	beblhka	beblhmai	eblhqhn
bh	bainw	bhsomai	ebhn	bebhka	-	-
gene	ginomai	genhsomai	egen-omhn	gegon-a	gegenhmai	egenhqhn
gnw	ginwskw	gnwsomai	egnwn	egnwka	egnwsmai	egnwsqhn
id	eidw" (subj)			oid-a / hd-ein (act) / (aor)		
eure	euriskw	eurhsw	eur-on	eurhka	-	eureqhn
qane/qnh	q-nhskw	qanoumai	eqan-on	teqnhka	-	-
kale/klh	kalw	kalesw	ekalesa	keklhka	keklhmai	eklhqhn
krin/kri	krinw	krinw:	ekrina	kekrika	kekrimai	ekriqhn
maq/maqh	manqanw	-	emaqon	memaqhka	-	-
swd/sw	swzw	swsw	eswsa	seswka	seswsmai	eswqhn
feug	feugw	feuxomai	ef-ugon	pefeug-a	-	-

-mi verbs - principal parts

A tense or voice in brackets underneath a principal part means that this form takes another meaning.

Root	Present	Future	Aorist Act	Perf Act	Perf Pass	Aor Pass
qe	tiqhmi	qhsw	eqhka	teqeika	teqeimai	eteqhn
do	didwmi	dwsw	edwka	dedwka	dedomai	edoqhn
sta (trans)	isthmi	sthsw	esthsa			
sta (intrans)			esthn	esthka (pres / imp)		estaqhn (aor act)

Some mixed tense stems – principal parts

Present	Future	Aorist Act	Perf Act	Perf Pass	Aor Pass
ercomai	eleusomai	hlqon	elhluqa	-	-
esqiw	fagomai	efagon	-	-	-
ecw	exw	escon	eschka	-	-
lambanw	lhmyomai	elabon	eilhfa	eilhmmai	elhmfqhn
legw	erw	eipon	eirhka	eirhmai	errhqhn / erreqhn
oraw	oyomai	eidon	ewraka / edraka	-	wfqhn
pascw	-	epaqon	peponqa	-	-
ferw	oisw	hnegka / hnegkon	enhnoca	-	hnecqhn

Table of the regular verb

Spans the next two pages.

Table of the regular verb - page 1

The Regular Verb	Principal parts	Present (λ uw)				Future (λ usw)		Aorist active (ε] usa)
	Tense / Voice	Present / Act	Imperfect / Act	Present / Mid / Pass	Imperfect / Mid / Pass	Future / Act	Future / Mid	Aorist / Act
Indicative	Augment	-	e	-	e	-	-	e
	Reduplication	-	-	-	-	-	-	-
	Tense formative	-	-	-	-	s	s	sa
	Connecting vowel	e/o	e/o	e/o	e/o	e/o	e/o	-
	Personal endings	Prim / Act	Sec / Act	Prim / Mid / Pass	Sec / Mid / Pass	Prim / Act	Prim / Mid / Pass	Sec / Act
	1S	l uw	e] uon	l uomai	e] uomhn	l usw	l usomai	e] usa-
	2S	l ueiV	e] ueV	l uh/	e] uou	l useiV	l ush/	e] usaV
	3S	l uei	e] ue(n)	l uetai	e] ueto	l usei	l usetai	e] use(n)
	1P	l uomen	e] uomen	l uomeqa	e] uomeqa	l usomen	l usomeqa	e] usamen
	2P	l uete	e] uete	l uesqe	e] uesqe	l usete	l usesqe	e] usate
	3P	l uousi(n)	e] uon	l uontai	e] uonto	l usousi(n)	l usontai	e] usan
Imperative	2S	l ue		l uou				l uson
	3S	l uetw		l uesqw				l usatw
	2P	l uete		l uesqe				l usate
	3P	l uetwsan		l uesqwsan				l usatwsan
Infinitive		l ueen → l uein		l uesqai				l usa--i
Participle	Participle morpheme	nt nt-sa nt		men-o men-h men-o				nt nt-sa nt
	Case endings (decl.)	m (3) f (1) n (3)		m (2) f (1) m (2)				m (3) f (1) n (3)
	NS	l uwn- l uousa l uon		l uomenoV l uomenh l uomenon				l usaV l usasa l usan
	GS	l uontoV l uoushV l uontoV		l uomenou l uomenhV l uomenou				l usantoV l usashV l usantoV
	DS	l uonti l uoush/ l uonti		l uomenw/ l uomenh/ l uomenw/				l usanti l usash/ l usanti
	AS	l uonta l uousan l uon		l uomenon l uomenhn l uomenon				l usanta l usasan l usan
	NP	l uonteV l uousai l uonta		l uomenoi l uomenai l uomena				l usanteV l usasai l usanta
	GP	l uontwn l uouswn l uontwn		l uomenwn l uomenwn l uomenwn				l usantwn l usaswn l usantwn
	DP	l uousi(n) l uousaiV l uousi(n)		l uomenoiV l uomenaiV l uomenoiV				l usasi(n) l usasaiV l usasi(n)
	AP	l uontaV l uousaV l uonta		l uomenouV l uomenaV l uomena				l usantaV l usasaV l usanta
Subjunctive	Shortened T.F.	-		-				s
	Lengthened C.V.	w/h		w/h				w/h
	Personal endings	Act		Mid / Pass				Act
	1S	l uw		l uwmai				l usw
	2S	l uhV		l uh/				l ushV
	3S	l uhV		l uhtai				l ushV
	1P	l uwmen		l uwmeqa				l uswmen
	2P	l uhte		l uhsqe				l ushte
	3P	l uwsi(n)		l uwntai				l uswsi(n)

Table of the regular verb - page 2

	Perfect active (eJ uqhn)		Perfect passive (eJ uqhn)		Aorist passive (eJ uqhn)	
Aorist Mid	Perfect Act	Pluperfect Act	Perfect Mid / Pass	Pluperfect Mid / Pass	Aorist Pass	Future Pass
e	–	(e)	–	(e)	e	–
–	l e	l e	l e	l e		
sa	ka	kei	–	–	qh (qe)	qhs
–	–	–	–	–	–	e/o
Sec	Prim	Sec	Prim	Sec	Sec	Prim
Mid / Pass	Act	Act (alt)	Mid / Pass	Mid / Pass	Act (alt)	Mid / Pass
eJ usamhn	l el uka	(e)l el ukein	l el umai	(e)l el umhn	eJ uqhn	l uqhsomai
eJ usw	l el ukaV	(e)l el ukeiV	l el usai	(e)l el uso	eJ uqhV	l uqhsh/
eJ usato	l el uken	(e)l el ukei	l el utai	(e)l el uto	eJ uqh	l uqhsetai
eJ usameqa	l el ukamen	(e)l el ukeimen	l el umeqa	(e)l el umeqa	eJ uqhmen	l uqhsomeqa
eJ usasqe	l el ukate	(e)l el ukeite	l el usqe	(e)l el usqe	eJ uqhte	l uqhsesqe
eJ usanto	l el ukasi(n)	(e)l el ukeisan	l el untai	(e)l el unto	eJ uqhsan	l uqhsontai
l usai					l uqhti	
l usasqw					l uqhtw	
l usasqe					l uqhte	
l usasqwsan					l uqhtwsan	
l usasqai	l el ukenai		l el usqai		l uqhnai	

Aorist Mid			Perfect Act			Perfect Mid / Pass			Aorist Pass		
men-o m (2)	men-h f (1)	men-o m (2)	ot m (3)	ui-a f (1)	ot m (3)	men-o m (2)	men-h f (1)	men-o m (2)	nt m (3)	nt-sa f (1)	nt m (3)
l usamenoV	l usamenh	l usamenon	l el ukwV	l el ukuia	l el ukoV	l el umenoV	l el umenh	l el umenon	l uqeiV	l uqeisa	l uqen
l usamenou	l usamenhV	l usamenou	l el ukotoV	l el ukuiaV	l el ukotoV	l el umenou	l el umenhV	l el umenou	l uqentoV	l uqeishV	l uqentoV
l usamenw/	l usamenh/	l usamenw/	l el ukoti	l el ukuia/	l el ukoti	l el umenw/	l el umenh/	l el umenw/	l uqenti	l uqeish/	l uqenti
l usamenon	l usamenhn	l usamenon	l el ukota	l el ukuian	l el ukoV	l el umenon	l el umenhn	l el umenon	l uqenta	l uqeisan	l uqen
l usamenoi	l usamenai	l usamena	l el ukoteV	l el ukuiai	l el ukota	l el umenoi	l el umenai	l el umena	l uqenteV	l uqeisai	l uqenta
l usamenwn	l usamenwn	l usamenwn	l el ukotwn	l el ukuiwn	l el ukotwn	l el umenwn	l el umenwn	l el umenwn	l uqentwn	l uqeiswn	l uqentwn
l usamenoiV	l usamenaiV	l usamenoiV	l el ukosi(n)	l el ukuiaiV	l el ukosi(n)	l el umenoiV	l el umenaiV	l el umenoiV	l uqeisi(n)	l uqeisaiV	l uqeisi(n)
l usamenouV	l usamenaV	l usamena	l el ukotaV	l el ukuiaV	l el ukota	l el umenouV	l el umenaV	l el umena	l uqentaV	l uqeisaV	l uqenta

Aorist Mid	Perfect Act	Perfect Mid / Pass	Aorist Pass
s			q
w/h			w/h
Mid / Pass			Act
l uswmai			l uqw
l ush/			l uqh/V
l ushtai			l uqh/
l uswmeqa			l uqwmen
l ushsqe			l uqhte
l uswntai			l uqwsi(n)