

Square of Stops Summary

Stop: a consonant whose sound is formed by slowing down or completely stopping the flow of air through the mouth.

Labials are formed by using the lips to impede the air flow

momentarily, which is essential in creating the sound.

Velars are formed by pushing up the middle of the tongue against the soft part of the roof of the mouth.

Dentals are formed by the tongue against the back of the teeth.

	Unvoiced	Voiced	Aspirates
Labials	π	β	φ
Velars	κ	γ	χ
Dentals	τ	δ	θ

Unvoiced do not use the voice box in their pronunciation.

Voiced do use the voice box in their pronunciation.

Aspirates the air flow in this group is not actually stopped but only slowed down. However, because they fit into the pattern so well it is easier to view them as stops.

Nouns Ending in a Stop (p. 79)

The ντ combination drops out when followed by sigma (πᾶντ + σ → πᾶς).

A tau cannot stand at the end of a word and will drop off.

No case ending is used in stems ending in -ματ. The tau then drops out, ὄνοματ + – → ὄνοματ → ὄνομα.

π	β	φ	+ σ →	ψ
κ	γ	χ	+ σ →	ξ
τ	δ	θ	+ σ →	σ

Future Indicative Verbs Ending in a Stop (p. 155)

- They follow the same patterns as with nouns:

Labial	πσ → ψ	βλεπ	+ σω →	βλέψω
	βσ → ψ			
	φσ → ψ	γραφ	+ σω →	γράψω
Velar	κσ → ξ	διωκ	+ σω →	διώξω
	γσ → ξ	αγ	+ σω →	ᾶξω
	χσ → ξ	έλεγχ	+ σω →	έλεγξω
Dental	τσ → σ			
	δσ → σ	βαπτιδ	+ σω →	βαπτίσω
	θσ → σ	πειθ	+ σω →	πεισω

First Aorist Active/Middle Indicative Verbs Ending in a Stop (p. 200)

- They follow the same patterns as with nouns:

Labial	πσ → ψ	βλεπ	+ σα →	ἔβλεψα
	βσ → ψ	τρίβ	+ σα →	ἔτριψα
	φσ → ψ	γραφ	+ σα →	ἔγράψα

Velar	κσ → ξ	πλέκ	+	σα	→	ἔπλεξα
	γσ → ξ	πνίγ	+	σα	→	ἔπνιξα
	χσ → ξ	βρέχ	+	σα	→	ἔβρεξα
Dental	τσ → σ					
	δσ → σ	βαπτιδ	+	σα	→	βαπτίσα
	θσ → σ	πειθ	+	σα	→	πεισα

Aorist and Future Passive Indicative (p. 210)

- The stops in this case undergo aspiration. In one sense, in English it is what turns “t” to “th,” or “p” to “ph,” or “c” to “ch.” Theta is like an aspirated tau.

π	β	φ	+θ →	φ	πθ	→	φθ	*βλεπ	+	θη	→	ἔβλέφθην
κ	γ	χ	+θ →	χ	βθ	→	φθ	*έλημβ	+	θη	→	ἔλήμφθην
τ	δ	θ	+θ →	σ								
					κθ	→	χθ	*διωκ	+	θη	→	ἔδιώχθην
					γθ	→	χθ	*αγ	+	θη	→	ἤχθην
					τθ	→	σθ					
					δθ	→	σθ	*βαπτιδ	+	θη	→	ἔβαπτίσθην
					θθ	→	σθ	*πειθ	+	θη	→	ἔπέισθην

Consonantal Reduplication in Perfects (p. 222)

- If the consonant that was reduplicated is φ, χ or θ, the reduplicated consonant will change to π, κ, or τ, respectively.

φ	→	πεφ–	φανερών	→	φεφανερο	→	πεφανέρωκα
χ	→	κεχ–	χαρίζομαι	→	χεχαρίζ	→	κεχάρισμαι
θ	→	τεθ–	θεραπεύω	→	θεθεραπευ	→	τεθεράπευμαι

Perfect Middle/Passive Indicative Verbs Ending in a Stop (p. 231)

	<i>labial</i> (π β φ)	<i>velar</i> (κ γ χ)	<i>dental</i> (τ δ θ)
	γράφω	διώκω	πείθω
μαι	γέγραμμαι	δεδίωγμαι	πέπεισμαι
σαι	γέγραψαι	δεδιωξαι	πέπεισαι
ται	γέγραπται	δεδίκται	πέπεισται
μεθα	γεγράμμεθα	δεδιωγμεθα	πεπέισμεθα
σθε	γέγραφε	δεδιωχθε	πέπεισθε
νται	εἰσὶ γέγραμμένοι	εἰσὶ δεδιωγμένοι	εἰσὶ πέπεισμένοι