

(N) Pseudorandom Numbers (1/2) [Solution]

N1. The nouns that follow one of the common patterns are: **(d) t̄oŋ** (*pot*) and **(f) t̄uŋ** (*horn*)

N2.

Root	1 st person	3 rd person	Translation
(a) l̄oŋ	lw̄oŋ	(b) l̄ooŋ	<i>to be different</i>
(c) c̄am	(d) c̄am	c̄em	<i>to eat</i>
p̄ec	p̄eεc	(e) p̄eεc	<i>to loot</i>
w̄ic	(f) w̄j̄εc	w̄iic	<i>to need</i>
(g) b̄ok	(h) bw̄ok	b̄ok	<i>to throw at</i>

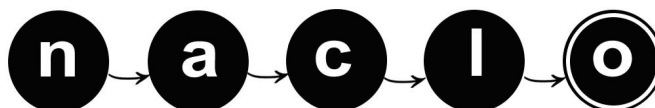
N3. Note that the forms given below are the forms deducible from the data in this problem and the assumption that these nouns conform to one of the common patterns. For some of these nouns, the actual Dinka singular or plural form is different from the deducible one(s).

Singular	Plural	Translation
(a) r̄j̄εm	r̄im	<i>blood</i>
(b) w̄j̄εεl, w̄iil	w̄iil	<i>bristle</i>
àŋâaar	(c) àŋéer	<i>buffalo</i>
r̄εεc	(d) réec	<i>fish</i>
(e) k̄al, k̄ól	k̄aal	<i>hole in ground</i>
k̄ók	(f) kw̄ok	<i>hole in tree</i>
r̄aaan	(g) r̄éen, r̄óŋ	<i>person</i>
(h) l̄éεk, l̄éek	léek	<i>pestle</i>
r̄ól	(i) rw̄ól	<i>voice</i>
j̄iit̄	(j) j̄iit̄	<i>well</i>

Explanation

Vowels come in 6 qualities and 3 grades:

Grade 1	i	e	a	ɔ	o	u
Grade 2	i	e	ε	ɔ	o	u
Grade 3	jε	ε	a	a	wɔ	wo



(N) Pseudorandom Numbers (2/2) [Solution]

Singular and plural patterns then correspond by changing the final vowel as follows (singular left, plural right), with subscripts indicating vowel grades:

$\acute{V}_1 - \grave{V}_3$

$\grave{V}_1 - \hat{V}_2$

$\grave{V}V_3 - \acute{V}V_2$

$\hat{V}V_1 - \acute{V}V_2$

$\acute{V}V_3 - \acute{V}_1$

In the verbs there are two (closely related) patterns, shown below (each row its own pattern):

Root	1 st person	3 rd person
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\acute{V}_1	\grave{V}_3	\hat{V}_2
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$\hat{V}V_1$	$\hat{V}V_3$	$\hat{V}V_2$
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Height: the Grades (1-3) show patterns with vowel height. All qualities except a / ε / a can be described by the rule: Grades 1 and 2 have same height, Grade 3 is lowered. To incorporate the quality a / ε / a, the rule can be made more general: from Grade 1 to Grade 2, do not lower (either maintain or increase height); from Grade 2 to Grade 3, lower.

Dinka also features a distinction between “creaky” and “breathy” vowels, but to simplify this problem, it has not been marked.

Source: Andersen, Torben. “Chapter 9. Number in Dinka,” in *Number— Constructions and Semantics: Case studies from Africa, Amazonia, India and Oceania* (Anne Storch and Gerrit J. Dimmendaal, eds.), John Benjamins, 2014.

