(S) Peace Only (1/4) [Solution]

S1.

    a. I have already forgotten his new cats.

    b. The weaver and the European saw thin mangoes because you hid.

    c. The thieves criticize a crooked dog in the house, don't they?

S2.

    a. **jèmèn tèyⁿín wó èmɛ́∴ wó nìnìwⁿé∴ náŋátì**

    b. **jâm ìjù pěyⁿ kùⁿ dìgɛ́tɔ́ɣɔ̀ là:**

    c. **gùgûn bé kùⁿ∴ fú: páɣárájɛ̀w sábù mǎŋgòlò kùⁿ ñɛ́:tìw**

S3. Observations of Jamsay grammar:

Sentence structure

    Sentences have a basic Subject-Object-Verb structure.

    "[sentence₁] **sábù** [sentence₂]" means "[sentence₁] because [sentence₂]".
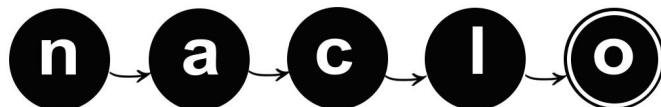
    là: (literally meaning "or") at the end of a sentence indicates a confirmation question.

Verbs

    Verbs have an initial root. Affixes are added optionally to reverse meaning and always to convey tense and person of the subject. The order of elements within a verb is:

	(optional) Reversive ("undoes" ROOT's meaning)	*(mandatory)* Tense	*(mandatory)* Person (matches subject)		
ROOT-	-RV-, where: R = **rⁿ** if ROOT has a nasal (**n, ŋ, m**), or **r** otherwise, and V = final vowel (including tone) of ROOT	**tì** = simple past		*singular*	*plural*
		jɛ̀ = recent perfect ("have already")	1ˢᵗ: **-m**		*n/a*
			2ⁿᵈ: **-w**		*n/a*
		tɔ́ɣɔ̀ = present	3ʳᵈ: Ø		**-ba**

    Note that the way some verbs take direct and prepositional objects varies between Jamsay and the English translations. For example, the root **sáŋárⁿá-** is translated as "take down the fence around [object]". It is the reversive of **sáŋá-**, meaning "fence in [object]".

n a c l o

(S) Peace Only (2/4) [Solution]

<u>Noun Phrases</u>

Noun phrases are not marked for case, i.e., the same rules apply to subject and object noun phrases.

Conjunction is marked with dying-quail intonation on each of the two nouns, i.e., "[NP$_1$]∴ [NP$_2$]∴" means "[NP$_1$] and [NP$_2$]". **săy** means "only" and follows its noun phrase (or conjoined noun phrases).

Nouns can be accompanied by an adjective, plural marker, definite marker, and/or quantifier ("all"). The general form of a noun phrase is:

[NP] = [possessive] [noun] [adjective] [plural marker] [definite marker] [quantifier]

> **wó** is the possessive pronoun "his". The possessive pronoun and the definite marker are not used in the same NP.

> Human nouns end in -**n** when singular and -**m** when plural. A separate plural marker is not used with human nouns.

> Adjectives have a root form that is used with non-human nouns. When an adjective accompanies a human noun, it ends in -(**i**)**n** when the noun is singular and -(**u**)**m** when the noun is plural, with the vowel included only if the root ends in a consonant.

> **bé** is the plural marker. It only occurs with non-human nouns and is obligatory to include when the noun is plural.

> **kù^n** is the definite marker, translated as "the". When it is not present, the English article "a" is used if the noun is singular, and no article is used if the noun is plural.

> **fú:** is the quantifier, translated as "all". When it is present, the previous word takes a dying-quail intonation (∴ at end of word).

<u>Tone Rules</u>

(Locative) A noun immediately before the verb, with final tone low (e.g., **úró → úrò**), is a locative, i.e., it indicates a location for the sentence. Locatives are translated with "in the" or "on the", depending on the noun.

When accompanied by an adjective, a noun has all its tones become low (e.g., **măŋgòlò → màŋgòlò**).

When a human singular or plural suffix -**in** or -**um** is added to an adjective, a final rising or falling tone in the adjective root "spreads out" over the extra syllable to become low-high or high-low, respectively (e.g., **pěy^n → pèy^{n}ín**, and **gôn → gónìn**).

(S) Peace Only (3/4) [Solution]

<u>Tone Rules: Possible Path to Solution</u>

The rules about tone changes were the most difficult parts of this problem. This section gives one possible approach to figuring out these rules.

The first step in discovering the tone rules is to observe which words have changing tone and which always appear with the same tones. Setting aside dying-quail intonation, nouns and adjectives are the only parts of speech that change tone; verbs, markers/particles, and so on always appear with consistent tone.

Let's start with nouns. We can make a list of nouns that appear (including in the exercises) with different tone configurations (and no other changes, e.g., to the suffix):

úró / ùrò / úrò

ójù / ójú

ànà / àná

gùgûn / gùgùn

nìnìwⁿé / nìnìwⁿè

ìjù / ìjú

măŋgòlò / màŋgòlò

sùrgòn / sùrgôn

ànsà:ràn / ànsá:rán

Optionally, we can loosen the criteria for our list slightly, and include two examples where instances of a noun differ only by suffix and display a varying tone pattern:
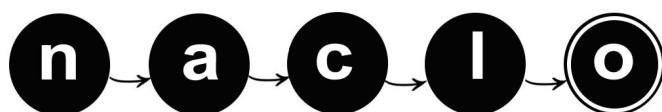
jèmèm / jémèn

gùgùyⁿím / gùgùyⁿìn

The main regularity we can notice is that most of the nouns here display exactly two patterns. The exception is **uro**, which displays three.

By working through other grammatical features in the problem, we can identify the locative as a distinct function of a noun: the noun appears directly before the verb, without any accompanying words, and is translated to indicate a location (e.g., "in the village"). (See previous page for full explanation.)

Idea: let's set locatives aside for now, and deal with non-locative instances of changing tone patterns. (We might arrive at this idea by wondering why **uro** behaves differently from other nouns, looking at the contexts it appears in, and noticing that one of them is locative. Since we can explain that appearance fairly well, let's focus on what we still can't explain.) If we remove locative instances from the list (and also remove any nouns which, once locatives are removed, only show a single tone pattern) we get:

úró / ùrò
gùgûn / gùgùn
nìnìwⁿé / nìnìwⁿè
ìjú / ìjù
mǎŋgòlò / màŋgòlò
sùrgôn / sùrgòn
ànsá:rán / ànsà:ràn
(**jémèn / jèmèm**)
(**gùgùyⁿím / gùgùyⁿìn**)

Once locatives are excluded, each noun displays exactly two tone patterns. After some examination, we can see that one of these is always all-low (these have been grouped on the right-hand side of the list above). Next, we follow the all-low pattern, observing the contexts in which it appears, and eventually notice that it is used whenever the noun occurs with an adjective.

We can now arrive at the rule: nouns have a "natural" or default tone pattern that they exhibit when they are not accompanied by an adjective. This tone pattern varies between nouns and cannot be deduced/recovered from other features of the word. When followed by an adjective, the natural pattern switches to an all-low pattern.

Now we can return to the locative, and compare (what we now believe to be) the natural pattern to the tone pattern in the locative, for all instances of locatives in the problem:

natural	locative
úró	úrò
ójú	ójù
àná	ànà

We can see that the natural → locative change is just the changing of the final tone from high to low.

Note: We don't know what to do when the final tone of the natural pattern is not high – there's not enough evidence in the problem to figure this out. We might even hypothesize (incorrectly, it turns out) that every noun that has a locative form in Jamsay has a final high tone naturally.

Finally, we turn to adjectives. There are no instances where the tone changes without any other change in the word, but we do see cases where an adjective "root" changes its tone when a suffix is added:

dǒŋ → dòŋúm
pěyⁿ → pèyⁿín
gôn → gónìn

From the similarity between **dǒŋ** and **pěyⁿ**, we can generalize to: rising → low-high over the final two syllables. **gôn** shows the opposite pattern: falling → high-low. The two patterns generalize further to the "tone spreading" rule (see above for full explanation).