Fifth International Olympiad in Theoretical, Mathematical and Applied Linguistics

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Team Contest

Presented below is the genealogical tree of one Hawaiian family. Also available is some information in the Hawaiian[1] language concerning kinship relations of some members of this family (designated by numbers 1–11) in the following format: first the name of some other member of the family is given, and then it is stated in what relation s/he stands to the family member designated by the corresponding number. Finally, translations of five Hawaiian words are also provided.

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[1] The Hawaiian language belongs to the Austronesian language family. It is spoken by about 2000 people in the American state of Hawaii.

1.
Akamu, kupuna kāne kualua.
Elta, makuakāne hanauna.
Mano, hūnōna kāne.
Loni, makuahine.

2.
Mihil, kupuna wahine kualua.
Nani, wahine.
Halia, kupuna wahine.
Kalena, makuahine.
Alika, hūnōna kāne.
Etana, makuakāne.

3.
Nani, hūnōna wahine.
Kai, mo`opuna kāne kualua.
Kalena, wahine.
Kani, mo`opuna wahine kuakāhi.
Akela, keikikāne.

4.
Nani, makuahūnōai wahine.
Elta, makuahūnōai kāne.
Ola, wahine.

5.
Etana, keikikāne hanauna.
Lola, makuahine kōlea.
Akamu, makuakāne.
Halia, kaikuahine.
Aukai, keikikāne.

6.
Mihil, kupuna wahine kuakāhi.
Halia, makuahine hanauna.
Kimo, makuakāne.
Akamu, kupuna kāne.

7.
Kani, mo`opuna wahine.
Elta, kāne.

8.
Kalena, makuahine.
Abia, keikikāne.
Etana, makuakāne kōlea.

9.
Malia, mo`opuna wahine kuakolu.
Mihil, makuahūnōai wahine.
Akamu, kāne.
Etana, mo`opuna kāne.
Kani, mo`opuna wahine kuakolu.

10.
Mano, kāne.
Keoki, makuakāne.
Akamu, kupuna kāne kuakolu.
Etana, kupuna kāne kuakāhi.

11.
Abia, mo`opuna kāne.
Makani, keikikāne.

kupuna	source
wahine	woman
`ekāhi	one
`elua	two
`ekolu	three

§1.   Reconstruct the genealogical tree by filling the empty boxes with names. The tree shows all the relations of the "parent—child" type and only them. If both parents are shown, they are presumed to be (or have been) married to each other. Older generations are situated higher in the tree.

§2.   Write down the names of the eleven family members designated by numbers.

<u>Note</u>: ` is a specific consonant (the glottal stop), ō, ā, ū are long vowels.

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English text: *Dmitry Gerasimov*