

Problem 3 (20 points). Here are four different representations of a certain number:

Somali language (Latin script)	toddoba iyo sagaashan
Somali language (Osmanya script)	٩٨٦ ٣٨٩٩٥٢
Osmanya numerals	٤٣
Arabic numerals	97

Below are ten arithmetic equalities written using the four types of systems shown above with some parts left blank. All the numbers that appear in the equalities are integers.

- [1] $٣٥٠٠١٧ + J = ٥٠$
- [2] $C \times \text{siddeed boqol} = ٩٨٠٠$
- [3] $٥٥ \times ٩٨٦ \times ٣٨٩٩٥٢ = ٥٤٣$
- [4] $٩٨٦ + \text{sagaal iyo sagaashan} = \text{boqol}$
- [5] $٦٦ \times ٣٨٩٩٥٢ = C \times \boxed{}$
- [6] $٥ \times \boxed{} = ٣٨٩٩٦ \times ٩٨٦$
- [7] $٣٨٩٩٦ \times ٩٨٦ \times ٩٨٦ \times ٣٨٩٩٥٢ \times ٧٧٨ = \text{rug}$
- [8] $٣٨٩٩٦ \times \boxed{} = ٩٨٦ + \text{koob iyo toddobaatan}$
- [9] $٣٨٩٩٥٢ \times ٩٨٦ \times ٩٨٦ \times ٣٨٩٩٦ = ٦٦٦ + \text{lix boqol iyo koow}$
- [10] $٦٦٦ \times ٩٨٦ \times ٩٨٦ \times ٩٨٦ \times ٣٨٩٩٥٢ = ٢٠٢١ = \boxed{}$

(a) Fill the blanks (A–D) in Osmanya numerals.

(b) Write the equalities [1–9] in Arabic numerals.

(c) Write in Somali (Latin script):

E. 401 F. ٤٠٨٦ G. ٩٨٦ ٣٨٩٩٥٢ ٩٨٦ ٣٨٩٩٥٢

(d) Write in Somali (Osmanya script):

H. ٧١ I. ٦٦٦ J. saddex iyo afartan

(!) No additional explanation besides the answers is required, nor will be marked.

⚠️ Somali belongs to the Cushitic branch of the Afro-Asiatic family. It is spoken by approx. 1,600,000 people in East Africa, mainly in Somalia and Djibouti.

The Osmanya script is a writing system that was created between 1920 and 1922 to transcribe the Somali language. In 1961, it was recognized as one of the official scripts by the Somali government. Nowadays, it is mostly substituted by the Latin script. —Minkyu Kim