

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

Somali language (Latin script)	toddoba iyo sagaashan
Somali language (Osmanya script)	ጥከዐዐከሣ ፬፻፳፻፳፻
Osmanya numerals	፲፭
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] $፩፻፵፱፻፳፻ + ፭ = ፻፵$
- [2] $፫ \times \text{siddeed boqol} = ፶፻፵፵$
- [3] $፻፻ \times \text{፻፹፱ ፬፻፳፻ ጥከሣ፻፳} = ፻፻፻$
- [4] $\text{፻፹፱} + \text{sagaal iyo sagaashan} = \text{boqol}$
- [5] $፻፻ \times ፻፫፻፹፻፳፻ = ፫ \times \boxed{\text{A}}$
- [6] $\text{፻} \times \boxed{\text{B}} = ፻፫፻፹፻፳፻ ፬፻፳፻ ፻፹፱፻፳፻$
- [7] $፻፫፻፹፻፳፻ ፶፻፳፻ ፻፻፻፻፳፻ \times ፲፻፳ = \text{rug}$
- [8] $፩፻፳፻፳፻ \times \boxed{\text{C}} = \text{፶፻፳፻፳፻} + \text{koob iyo toddobaatan}$
- [9] $፩፻፵፱፻፳፻ ፶፻፳፻፳፻ ፬፻፳፻ ፲፱፻፵፵፻፳፻ = ፻፻፲ + \text{lix boqol iyo koow}$
- [10] $\text{፲፻፶፻ ፻፲፩ ፬፻፳፻ ፻፹፱ ፬፻፶፻፻፳፻} = 2021 = \boxed{\text{D}}$

(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. ፫፵፻፳

G. ፻፲፩ ፬፻፳፻ ፶፻፳፻፳፻ ፬፻፳፻ ፩፻፵፱፻፳፻

(d) Write in Somali (Osmanya script):

H. 71

I. ፲፻፲፱

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