First International Olympiad in Theoretical, Mathematical and Applied Linguistics

8–12 September 2003, Borovetz, Bulgaria

Individual Contest

Problem 1 (20 marks)

In 1916 the Russian scholar Jacob Linzbach invented a universal writing system, which he thought should be understandable to all people, regardless of their native tongue. Linzbach called his new language 'Transcendental Algebra'.

Several sentences have been written in Linzbach's language and translated into English:

1. $(\frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}\dot{\imath}\dot{\Lambda}} + \frac{\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}})^{\leqslant}$ — The father and the brother are talking.
2. $\dot{n}(> \dot{I})^{[\!]\!-\!-\mathrm{t}}$ — The giants are working without haste.
3. $(\frac{\dot{\imath}\dot{\Lambda}(-\dot{\Lambda}\dot{\Lambda})}{(-\dot{\Lambda}\dot{\Lambda})})^{\not{}} = \boxtimes$ — The orphans are writing a letter.
4. $(-\dot{n}\dot{I}_1)^{\not{}} - \mathrm{t} = \dot{I}_2$ — It wasn't us who wrote about you (sg.).
5. $\boxtimes^{\sqrt{\not{}}} - \mathrm{t} = -\dot{\Delta}_3$ — It was not by her that the letter was written.
6. $(\frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}\dot{\imath}\dot{\Lambda}})^{-\smile} = [\!]\!-$ — The father doesn't like the work.
7. $((> \dot{I}) - \smile)^{\frown} - \mathrm{t} = \frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\imath}\dot{\Lambda}}$ — The wicked giant ate the parents.
8. $\dot{\Delta}_3^{-\mathrm{t}}$ — She is not in a hurry.

Assignment 1. Translate into English:

9. $\dot{I}_3^{\smile - \sqrt{\smile}}$
10. $(\frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}\dot{\Lambda}\dot{\imath}} - \leqslant)^{\not{}} + \mathrm{t} = \frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}\dot{\imath}\dot{\Lambda}} + \frac{\dot{\Lambda}\dot{\Lambda}\dot{\imath}\dot{\Lambda}}{\dot{\Lambda}\dot{\imath}\dot{\Lambda}}$
11. $\dot{\Delta}_2^{[\!]\!-\!+\mathrm{t}-\leqslant} - \mathrm{t}$
12. $\boxtimes^{\sqrt{\frown}} - \mathrm{t} = \frac{\dot{\imath}\dot{\Lambda}}{\dot{\mathrm{t}}} - \frown$

Assignment 2. Write in 'Transcedental Algebra':

13. It wasn't about them that my husband and I (*say:* I and the husband) talked.
14. The people are working reluctantly.
15. The good widow loves the unemployed dwarf.
16. You (pl.) will be talked about.

Explain your solution. (Ksenia Guiliarova)