## Eötvös Mathematical Competition 1895

- 1. Prove that there are exactly  $2(2^{n-1}-1)$  ways of dealing *n* cards to two persons. (The persons may receive unequal numbers of cards.)
- 2. Construct a point N inside a given right triangle ABC such that the angles  $\angle NBC$ ,  $\angle NCA$  and  $\angle NAB$  are equal.
- 3. Given the circumradius R of a triangle, a side length c, and the ratio a/b of the other two side lengths, determine all three sides and angles of this triangle.



The IMO Compendium Group, D. Djukić, V. Janković, I. Matić, N. Petrović www.imo.org.yu Typed in IAT<sub>E</sub>X by Ercole Suppa

1