Coding Theory for the Classroom

Josef Boehm

ACDCA and DERIVE & TI-CAS Usergroup
Austria

nojo.boehm@pgv.at

Workshop Proposal for the DERIVE & TI-Nspire strand

ABSTRACT

The curriculum for the Austrian “Handelsakademie” (= College for Business Administration) does not contain only “Cryptography” but also “Coding Theory”. I took these chapters as one of the co-authors of a textbook series without knowing exactly the intentions of the authors of the curriculum.

It was a challenge to find issues in Coding Theory which are beyond of only discussing the ASCII-Code and presenting ISBN- and EAN-Code and which are suitable for the students (age 17).

We will explain and work with data compressing like the Huffman-Code and with self correcting codes like the Hamming-Code. We will also show many questions which lead the students to a better understanding of the problems.

CAS- and spreadsheet tools will support the activities.

Keywords

Coding Theory, proofs, CAS, spreadsheet